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THE MEDICAL JOURNAL OF AUSTRALIA.

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THE APPEARANCES OF THE LUNGS AFTER DEATH FROM ASPHYXIA AND THE REASONS THEREFOR.[1]

By **W. F. Litchfield, M.B. (Syd.),**

Honorary Assistant Physician, Royal Alexandra Hospital for Children; Honorary Assistant Pathologist, Royal Prince Alfred Hospital, Sydney.

Some years ago Dr. Macdonald Gill and I observed that in children who died from asphyxia due to diphtheria of the air passages, the lungs were unusually light and dry, and in 1908, in my book on "Diphtheria in Practice," I wrote: "In twenty-seven out of fifty-nine post-mortem examinations on children who died from laryngeal diphtheria, death was due to pure asphyxia from blocking of the air passages. The conditions noted, in the main, were as follows: Membrane more or less detached and altered was found in the larynx, trachea and bronchi. The bronchioles sometimes contained membrane, but were more often plugged with a muco-purulent material. The lungs were invariably light, dry and bloodless. Some lobular emphysema was always present. Sometimes there was an interstitial emphysema extending into the mediastinum. A few small areas of lobular collapse were usually seen. In eight of the cases one or two small areas of consolidation were noted. Otherwise there was no pneumonia, either lobular or massive. The right heart was dilated and full of dark blood-clot. The liver and other organs showed signs of congestion. The peculiar light, dry and bloodless condition of the lungs noted above in cases of asphyxia is somewhat remarkable, and the physiological explanation of it is not clear."

Recently I examined the body of a woman aged 48, who died from fibrinous bronchitis at the Royal Prince Alfred Hospital. In her case fibrinous plugs extended from the larger into the small bronchi universally. There was no other disease. The lungs weighed 312 grammes each, and were dry and bloodless. There was some lobular emphysema and some congestion of the lungs, kidneys and pancreas revealed on microscopic examination. The right side of the heart contained dark blood clot, but was not very distended. This case revived my interest in the matter, and I have inquired into the whole question of the appearances of the lungs after death from asphyxia. I find that there are some differences of opinion, and a lack of clarity of thought on the part of medical authorities on the subject. Halliburton, in his "Handbook of Physiology" says: "After death from asphyxia it is found that in the majority of cases that the right side of the heart and pulmonary arteries and systemic veins are gorged with dark, almost black blood, while the left side of the heart, the pulmonary veins and the arteries are empty." He does not specifically mention the lungs.

[1] Read at a Meeting of the New South Wales Branch of the British Medical Association on November 30, 1917.

In Taylor's book on medical jurisprudence the subject is dealt with exhaustively. In reference to the case of Campbell, Christison observed "that the conviction in the public mind that a well-informed medical man should always be able to detect death by suffocation simply by an inspection of the body, and without a knowledge of collateral circumstances, is erroneous, and may have the pernicious tendency of throwing inspectors off their guard, by leading them to expect strongly marked appearances in every case of death from suffocation. That such appearances are very far from being always present, ought to be distinctly understood by every medical man who is required to inspect a body and give an opinion of the cause of death."

In the case of Taylor, the medical inspectors considered that suffocation was not the cause of death, because "there was no appearance of congestion about the lungs." In this case the evidence was opposed to the inspectors' opinion. Watson observes that the gorged state of the right side of the heart and lungs is greatest when the act of suffocation has been slow and gradual by the access of air to the lungs not having been completely prevented. When, on the other hand, death has taken place quickly and suddenly from this cause, there is little or no unusual congestion of blood in the lungs or heart. He described several cases of suffocation in which the lungs were quite free from engorgement. With regard to experiments on animals, it is recorded in Taylor's "Medical Jurisprudence": "If death has occurred slowly (by proper management of the experiment), the lungs are found intensely engorged; if death has occurred very rapidly, the lungs may be quite anæmic, their condition varying inversely with that of the right side of the heart, which, in the first case, is only moderately distended with blood, but in the latter is so distended as to be almost on the point of bursting."

Tardieu has given the most complete account of the appearances on human beings after death from strangulation and suffocation. The state of the lungs was variable. Contrary to what is generally alleged to be characteristic of death by asphyxia, Tardieu found these organs to contain little blood. Sometimes they were congested, at other times normal. There was a bloody froth extending into the air passages in many cases. Emphysema was constant, and ecchymosis on the surfaces of the lungs frequent. From the above it would appear that in the majority of cases of asphyxia, other than that of drowning, which we have not yet considered, the lungs after death are light, dry and bloodless. In some cases congestion of the lungs has been noted. It will be observed that several authorities maintain that the lungs are more likely to be congested when the asphyxia has been slowly brought out. This is opposed to my observation in diphtheria and fibrinous bronchitis, in which cases the asphyxia must have been very gradual, and in which the lungs were invariably dry and bloodless.

The discrepancy may lie in the fact that in the experimental and other cases of slow asphyxia reported with congestion of the lungs, the blocking of the air passages was intermittent or not uniformly continuous. The bearing of this view will be evident later.

Now, the position with regard to asphyxia from drowning is very different. A more or less uniform condition of the lungs is found. There is a quantity of watery, mucous froth in the air passages, and the lungs "are distended in a flabby condition, and, owing to the penetration of their substance by water, they have lost their elasticity." It has, however, been established that the froth in the air passages and the water in the lungs is not due to water sucked in from the immersing fluid. There is a popular impression which is not unshared by medical men that, in drowning, the lungs become filled with water from without. This is not so. The froth in the air passages consists, for the greatest part, of mucus and air, and the water in the lungs of exuded serum, comparable to the fluid found in œdema of the lungs seen after death from many causes.

We can then say that, after death, in at least the majority of instances, from what we might call dry asphyxia, the lungs are light, dry and bloodless, while after death from drowning the lungs are heavy, wet and more or less engorged, although this wetness is not due to inspired water. What is the explanation? My hypothesis is that in dry asphyxia, the right heart fails before the left, and so the lung is sucked dry of blood, while in drowning the left heart fails before the right, with the result of engorgement and œdema of the lungs. In dry asphyxia, owing to the negative pressure in the lungs, the dyspnœa is predominantly inspiratory; blood is sucked into the thorax; the right heart becomes distended to bursting point, and its function paralysed; while the left heart is still able to beat. In drowning, when water on inspiration strikes the larynx and upper air passages, violent expiratory efforts or coughing is induced, and the dyspnœa becomes mainly expiratory, with the result that the right heart does not become so intensely gorged that it cannot beat, and in the meantime the left heart fails before the great increase of systemic arterial blood pressure, which is a constant feature in asphyxia.

I find on a reference to Coates' "Pathology" that Cohnheim in 1860 actually demonstrated that engorgement and œdema of the lungs could be produced by paralysing the left ventricle, while the right was still beating, and he considered that the œdema of the lungs that occurs so often just before death, was due to failure of the left ventricle.

With regard to the exceptions, namely, the cases where, according to my suggestion, the asphyxia has not been uniformly continuous, it is obvious that if, during the asphyxia, intermittent respiration occurs, the conditions within the chest may be altered and the right heart escape the extreme distension and paralysis that occurs when the asphyxia is uninterrupted.

RE-EDUCATION OF THE DISABLED SOLDIER.[1]

By **Hugh R. G. Poate, M.B., Ch.M. (Syd.), F.R.C.S. (Eng.),**
Honorary Assistant Surgeon, Royal Prince Alfred Hospital, Sydney.

The subject I wish to bring your attention to is one which has received only scant consideration in Australia, but which must shortly come into great prominence if our country is desirous, in the first place, of doing all she can for her discharged soldiers, and, secondly, of preserving to its fullest extent their economic value to the State.

This problem is one which has excited widespread interest in Great Britain, Italy, Belgium, Canada, and, I believe, New Zealand, but more particularly in France, where it has long been recognized that a self-supporting citizen, even though he be maimed, is a valuable asset to the country, whereas, a man living merely on his pension is not only entirely non-productive, but is an incubus. America, keen to benefit by the experiences of her Allies, has already laid plans for the benefit of her war-crippled soldiers, in fact, among the first of her troops coming to Europe were one hundred orthopædic specialists, to be trained in the treatment and re-education of the maimed and amputated. As far as can be learned, Germany is devoting much thought and energy to the subject, and has made several ingenious attempts to secure ideas and appliances from France. The subject is a vast one, and has many conflicting side issues, so that I can merely touch on some of the broader features, and wish you to understand that my remarks are intended to apply only to the soldier discharged as unfit for further service on some surgical ground, such as amputation, nerve, bone or muscle injury, as medical cases demand special consideration.

Every available means should be taken in the endeavour to restore these men as nearly as possible to their old status in civil life, or, if this be impracticable, then they should be provided with the means of earning a livelihood independently of pension or charity.

We have had many "unfit" (in the military sense) returned home and discharged from the Army with a pension, and so far very little further has been done for the majority of them, except as regards providing them with artificial limbs or other necessary orthopædic appliance.

It is difficult for these men to settle down to the dull routine of life again, and they are often incapable of deciding what to do for themselves. The ordeal they have been through may temporarily upset their mental perspective, and one often hears men remark that, "having done their bit," it is up to the country to provide for their future, without realizing that it is to their own advantage to make a fresh start in life, and once more to assume the duties of citizenship. Others fall victims to the misplaced sympathy of solicitious friends, and develope habits of laziness, intemperance and moral ineptitude, from which it is hard to rouse them.

Mons. Justin Godart, Under-Secretary for Health in France, remarks: "It is obvious that the *inutile*

[1] Read at a meeting of the New South Wales Branch of the British Medical Association, on November 30, 1917.

must be systematically taught how to work again to save him from the mental depression or moral degeneracy which an incurable deformity is so prone to induce."

Mons. Maurice Barres, an eminent writer who has done much for France's crippled soldiers, gives as his opinion that "the remedy for this painful moral situation is work; the maimed soldier can and should work, and his need for it is even greater than that of the fit man."

We may, I think, take it as granted that something must be done for our crippled soldiers, and Sir Edward Carson's remarks in a recent speech epitomize the feelings of the people of Great Britain, when he said: "The nation deserved to be doomed if she neglected her fighters after the war. Nothing that could be done was good enough for them."

But how is it to be managed, and what part are we, as a medical fraternity, to play?

I can best answer these questions by briefly outlining my impressions of the methods in vogue in France and England, where I have had an opportunity of associating with the men directing the movement, and where I have seen some of the results attained.

After the amputated or crippled soldier has passed through the various stages of actual wound treatment, the ideal course is then to send him through (1) a centre of physio-therapy or functional re-education, (2) a centre of surgical equipment for the provision of artificial limbs, etc., and (3) a school of professional re-education, where he is shown how he may resume his old occupation or be taught a new one.

These centres must be closely associated with each other, and also be in touch with an employment bureau, so that when the man is fit and competent to resume civil life, a suitable occupation can be found for him.

The French centres of physio-therapy are much the same as the British military orthopædic hospitals, which are being established in various centres under the direction of Colonel Sir Robert Jones.

Provision is made for many curative or palliative methods of treatment, under the following headings:

(1) Electro-therapy: treatment by galvanic, faradic and high frequency currents, and also by ionization and diathermy.

(2) Kinesi-therapy: treatment by massage and gymnastics.

(3) Thermo-therapy: treatment by heat or electric light baths (red, blue, yellow, etc.).

(4) Hydro-therapy: treatment by whirlpool baths, sprays, douches, etc.

(5) Mechano-therapy: treatment by mechanical appliances for either active or passive movements.

It will serve no useful purpose to go into any detail concerning these subjects which are in everyday use among us, but I wish to emphasize the fact that this is the stage where the medical man first comes in as influencing the patient for his future welfare.

It is during his course of physio-therapy that we have an early opportunity of instructing the patient, and of convincing him of the possibility of a functional re-education of the maimed limb, or of his stump.

It is essential that a trained medical man be in charge of each department, and he should not only take into account the actual physical disability with which he is dealing, but also realize that a certain amount of mental re-education is a necessity if the best results are to be attained. These men have been leading an existence as different from their civil life as night is from day. All their finer instincts are dulled, their faculty for the association of ideas is inhibited, and a certain amount of stagnation occurs in their mental processes.

"Re-education must therefore take into account these several factors, as well as the various pathological conditions which may be presented; at times it will deal only with the patient's control of movements; at other times it will deal with his powers of perception, or again with his adaptability to co-ordinative working, and often with his physiological balance, in attempting to call into play again the stored-up mental impressions of his sentient being, and in rousing his conscious volition." (*Ré-education Fonctionelle*, by Professor J. Camus.)

Functional re-education along these lines must be insisted upon before the patient is allowed to enter upon a course of professional re-education. As a proof of this, one has only to compare the efficiency, and, consequently, the industrial gain to the State, of the one-armed men, who have had a thorough training before and after the fitting of their artificial limbs, with those others who have received no functional re-education, and consider their limbs as very little, if any, use apart from a cosmetic effect, and often discard them on the very occasions when they should be of value.

It has been stated that a man who has lost an arm, has lost as much as four-fifths of his industrial efficiency, but with care in training, in the selection of an artificial limb, and of a suitable occupation for him to follow, his economic value can be brought, on an average, to 80% of its original worth.

The most scientific and accurate method of restoring and registering progress of functional ability is that evolved by Professor Jules Amar at his laboratory in the *Conservatoire des Arts et Métiers*, Paris, where he occupies the chair of the Physiology of Professional Work.

He is directing a good deal of attention to those cases where the upper limb has been lost or crippled, as these present a much more difficult problem than injuries to, or loss of the lower limb. As a result of his experience, he states: "The functional re-education of stumps improves their physiological condition, renders them flexible, and combats muscular and nervous degeneration. It allows of a control of the artificial limb, with a perfectly balanced strength, and with increased tactile and kinæsthetic power. To these advantages, most valuable as regards orthopædic surgery, is added that of the increased *morale* of these men, gained by restoring to them a positive belief in their own powers and a hope for their future."

The main principles and aims of Amar's system are as follows:—

A. As early as possible to investigate and estimate the "total physiological value" of the patient. This is done by means of various instruments, from which accurate data can be obtained and recorded concerning the power of the stump, the patient's resistance to fatigue, the alertness of his reflex mechanism, his powers of co-ordination, etc.

B. Next comes a course of functional re-education of the stump or limb, both sensory and motor functions being dealt with. The patient is encouraged to interest himself in what is being done.

C. When training has progressed to the stage where one can determine the man's full industrial capacity, and what trade he can follow, a suitable limb is ordered for his use.

D. The final stage is that of the man learning the use of the artificial limb, and working with it.

After this preliminary training, the man is then allowed to enter a school of professional re-education, where he either renews acquaintance with his old trade, or is taught a new one. Whenever possible, a man should resume his old occupation, so as to retain and benefit by the experience already gained at it. This will be of enhanced value to him under his present circumstances.

The question of learning a new trade is sometimes imperative, especially with one-armed men, and needs prudent thought and careful weighing, as well by the patient and his famliy as by the medical man under whose care he is, and who should be in a position to guarantee a certain degree of efficiency at the selected trade, to both patient and employer.

Schools of professional re-education are established in each Military District of France, and are under the control of experts and enthusiasts in each of the trades taught. In England, things are not developed to such an extent; but Colonel Sir Robert Jones has introduced a system of manual curative workshops in connexion with each of the military orthopædic hospitals, where men undergoing treatment may fill in spare time by working at their old trades or learning the rudiments of new ones, while at the same time they are exercising their damaged limbs in their old occupational control. After discharge from the hospital, the man enters one or other of the many schools run by private subscription, or may attend at a polytechnic institute to complete his training.

In France, there is no intermediate training, but the schools are placed alongside the various centres of physio-therapy or convalescent hospitals, and the men are encouraged to commence a definite course and continue at it until they are proficient at the selected trade.

Each school seems to be run on slightly different lines to the others, but the Institute at Saint Maurice, which is under the care of Dr. Bourrillon, one of the pioneers of this work in France, and an authority on the subject, struck me as being one of the best managed and best arranged of those I visited.

Here provision is made for both *interne* and *externe* pupils; the former also include those soldiers lodged in the adjacent convalescent hospital, who may attend the school if they wish; all are paid five pence per day while learning. Men on a provisional pension of 1s. 5d. per day have 1s. deducted for the school, but those with final pension are received free. All *internes* are provided with full board and lodging, and washing.

Externes are those who attend by the day, live at their own expense, pay nothing and receive five pence a day and their lunch. The hours of work are 7.30 to 11 a.m., and 12.30 to 5 p.m. daily.

All pupils producing saleable work have the cost of raw materials, plus 10%, deducted, and receive half the balance fortnightly. The other half is retained until they have completed their course, and serves to start them at their trade in civil life. If they prove worthy and capable workmen, a set of tools of their trade is given them to start with.

The total cost to the State of this school is 4s. per day for each man being trained.

The number of trades taught is unlimited, and includes that of the manufacture and repair of all varieties of artificial limbs and orthopædic appliances, as there is a centre of surgical equipment in connexion with the adjacent hospital.

* * *

We may now consider the question as to how we in Australia may best provide for our disabled.

First there is a great need for orthopædic centres in the capital cities of each State. We certainly have special departments on these lines in connexion with some of our military and civil hospitals, but they do not seem sufficient to cope with the work, even at the present time. We need a large hospital, devoted solely to orthopædic work, and staffed by men who have studied this class of work and developed what Colonel Sir Robert Jones terms the "orthopædic conscience."

All men who require or could be benefited by treatment, as carried out in the French centres of physiotherapy, should be transferred to and kept at these hospitals, either as in-patients or out-patients, until all has been done for them that is humanely possible.

In close association with these hospitals should be a series of workshops, each in charge of a competent instructor, where men could attend either as *interne* or *externe* students, for the purpose of learning a trade.

The establishment of centres of surgical equipment for the manufacture and repair of artificial limbs and all orthopædic appliances should be a necessity, and would provide a training-ground for many men.

Special instruction could probably be arranged at technical colleges, or with private firms in the city, for advanced pupils to receive finishing touches, or for workers at highly skilled or unusual trades.

In order to place a man finally, when competent, to earn an independent living, it would also be incumbent on the authorities to establish an employment bureau, and to keep in touch with both employers and employees.

So much for a very brief outline of this subject.

I understand that some effort has been made to cope with the problem; but things still remain in an unsatisfactory condition.

The medical profession as a body will play its part whole heartedly, and should insist on being heard in this matter at once, so that no further time may be lost.

There is a good deal of this work waiting at present; every week brings more, and before this war is over there will be a very great deal to be tackled. Start now, while we can deal with it, and we shall be ready for whatever the future may hold.

THE MODERN TREATMENT OF GONORRHŒA.[1]

By **L. E. Ellis, M.B., Ch.M.,**

Captain, Australian Army Medical Corps, No. 4 Australian General Hospital, Randwick.

The subject matter of this paper is based on observations made while doing work of military venereal hospitals in Egypt, England and France during the last two years.

The time at my disposal prevents me going fully into the subject; I trust merely to give some idea of the methods of treatment that are considered the best at the present day. Without further preamble I will get straight on.

Preventive Treatment.

Precautions taken during coition, such as a French letter, greasing of the exposed parts with vaseline, or the use of the Army "Dreadnought" are uncertain. There is one certain preventive measure, and that is the washing out of the urethra with a pint of 1 in 2,000 solution of potassium permanganate; if this be done even the morning following a coitus, the man cannot develope gonorrhœa. Dr. Kidd, of London, makes this statement, and any medical officer who has had to do with the prevention of gonorrhœa in the troops will bear it out. The importance of this fact cannot be exaggerated; were it universally adopted, gonorrhœa would cease to exist, and the more it is adopted, the less will be the prevalence of the disease.

Compulsory notification would only lead to concealment in a disease in which early treatment is so essential to success. Next best to preventive treatment is abortive treatment.

Abortive Treatment.

This should only be attempted providing the disease is not more two and a half days old, and providing also that it is not then fully established. Under these conditions, 50% to 70% of early cures are obtained. The essence of the treatment is the killing of the gonococci before they get out of reach by extension or digging in. This may be done by irrigating the urethra daily with three pints of a solution of potassium permangante, increasing the strength from 1 in 4,000 to 1 in 1,500. Another method is to seal in for six hours daily, by means of collodion, 1.5 c.cm. of a 5% solution of argyrol; this is done after micturition, and repeated for five days. Another method is by three injections daily of protargol, held in for periods up to ten minutes, the strength being gradually increased from 1% to 2½%, and then decreased again.

Verification of the cure brought about by any of these abortive methods must be made. An apparent cure is not always a real cure. Some forms of the disease may remain, such as infected Littré's glands, capable sooner or later of renewing the disease. The urethra should be examined with the urethroscope for such infected glands, which are probably the commonest cause of persistent gonorrhœa and of relapses. The prostate and seminal vesicles should also be investigated, and their contents examined microscopically. The preliminary admininstration of beer or the like will make the proof more sure, bringing to light, as it does, any latent infection. Thus, the cure is proved.

Abortive treatment failing, or not been deemed advisable, we reach the treatment of acute gonorrhœa.

Treatment of Acute Gonorrhœa.

There is great diversity of opinion among authorities as to the best line of treatment to adopt. One advises rest only as all that is necessary; a second advises drugs internally, with local injections held in for a certain time; another advises washing out of the anterior urethra only; another school advises urethro-vesical irrigation in all cases, and at once, and the sooner the better; another thinks that urethral electrolysis is the only effective treatment. As to electrolysis, this is only in the experimental stage, so I will say nothing about it. The evidence for and against it is conflicting. I will shortly describe the line of treatment that has given me the best results. For a few days, while the acute symptoms are at their height, I give no local treatment beyond external bathings, combined with rest, regulation of the bowels and an alkaline mixture. In a few days the acute symptoms subside somewhat. I then institute irrigation of the anterior urethra, gently given and weak at first (1 in 10,000 potassium permanganate), but increasing in strength and thoroughness. Under this treatment alone, the discharge may entirely abate; if so, the urethra is to be examined for infected follicles, and the cure otherwise proved as already described. If the discharge persists, and if the examination of the patient by the glasses test and by digital rectal examination and by symptoms demonstrates posterior urethritis, I then order urethro-vesical irrigations.

What fluid should be used for irrigations? All agree that potassium permanganate solution is the most satisfactory. For anterior irrigations, strengths increasing up to 1 in 2,000 are required. For urethro-vesical irrigations, the strength should be increased up to 1 in 5,000. The solutions must be strong enough or the disease goes on, but for posterior irrigations weaker solutions must be used. The posterior urethra seems clinically to be a much more delicate structure than the anterior, and I think it pays to respect it, both in the matter of irrigations and massage.

In regard to the frequency with which irrigations should be given, I have found that, for anterior treatment, three irrigations daily are sufficient. For urethro-vesical irrigations, two daily suffice. The frequency depends on the progress of the case; but it is better to err on the side of infrequency rather than over-frequency.

I prefer a Janet irrigator for both anterior and posterior irrigations, with a height of 60 cm. above the level of the urethra for the anterior irrigations

[1] Read at a Meeting of the New South Wales Branch of the British Medical Association on November 30, 1917.

and 135 cm. for posterior irrigations. With these precautions as to height, there is no fear of the solution passing behind the *compressor urethræ* in giving anterior irrigations. Posterior irrigations, on the other hand, may need some coaxing to get the solution to flow past the *compressor urethræ* muscle, but laxity of the patient and gentle persistence, aided by a local anæsthetic in the region of the compressor, generally overcome the difficulty. Occasionally, however, a hand syringe has to be used. A Janet apparatus consists of a reservoir containing the solution, a rubber tube therefrom ending in a glass or metal nozzle, which is sterilizable, and which occludes the meatus, without entering the urethra; a shield threaded on the tube prevents splashing, and a tap or clip regulates the flow. The urethra is well washed out before the fluid is allowed to flow into the bladder. The patient may lie, sit or stand during irrigation.

Prostatic Massage.—By a digital rectal examination every sixth day or so, a watch is kept on the prostate and seminal vesicles, and should these become involved by the disease, the question of massage arises. Difference of opinion exists also as to the advisability of massage; one advises early massage in all cases to prevent prostatitis; another advises no massage, even when prostatitis is present, as long as the prostatitis is acute, hot rectal injections or hip baths being given instead, or no treatment until the acute symptoms subside. For my part, I believe that massage does good in prostatitis; but it must always be gentle, especially at first, and increased rather in duration than in force. When there is prostatitis I have never seen harm follow massage, providing it is gentle, but I have seen epididymitis arise which to me seemed directly due to too energetic massage, probably from back pressure down the vas deferens. As to the frequency of massage, I think every fourth day is quite often enough.

Internal Drug Treatment of Gonorrhœa.—I gave this a good trial, without being greatly impressed. Drugs may do good, but their taste, and the indigestion and backache, and even nephritis that the balsams may produce, are considerable drawbacks; besides, we can get on quite well without them. For these reasons I have practically given up their use.

Vaccines.—I have found vaccines useful. If in a particular case a vaccine is given, nothing striking may follow. But if they start giving vaccines at a hospital where they had not been used before, a general improvement in the cases, with a shortening of the duration of the disease, follows. Autogenous vaccines are the best. I saw no benefit from "shop" vaccines. We used stock vaccines, which we prepared from selected cases. In France, for the more chronic cases, we used a mixed vaccine of gonococcus, staphylococcus, and a diphtheroid bacillus, organisms which frequently infest the urethra in chronic gonorrhœa. The dose of vaccine should be small. I began with three millions; a second dose four days later of ten millions was given, if no reaction followed first dose; the subsequent doses represented a 50% increase on the previous dose. In France, also, we used a sensitized vaccine, of which we could give larger doses with less reaction. Some of the medical officers there swore by vaccines; but my opinion is as stated above. Most authorities agree as to their utility in gonorrhœal rheumatism.

Under the treatment of acute gonorrhœa, as above described, the discharge may abate, or a drop may persist. In the former case the cure should be verified, as already described; if the drop persist, there is no need to be downhearted; the case may be quite near the end, needing merely a little careful treatment for a cure. The drop should be examined microscopically.

(1) It may show cocci other than gonococci. In that case irrigations with 1 in 2,000 cyanide of mercury will give good results.

(2) The drop may show no organisms, but quantities of pus cells. Here astringents are advisable, a good one being permanganate of zinc (1 in 8,000 to 1 in 2,000). Do not keep it up too long.

(3) The drop may show pus and gonococci. In this case give night and morning injections of one to two per cent. protargol, or the like, held in for several minutes. If an increase of discharge follows this treatment, continue the treatment for two or three weeks and then slacken and cease. Do not continue with any treatment indefinitely.

In dealing with the treatment of acute gonorrhœa, I have gone into some detail, because I thought that these details would interest you, and because of the importance of the subject. If acute gonorrhœa is well treated, fewer cases will persist.

Treatment of Persistent Gonorrhœa.

Time will only permit me to deal briefly with the treatment of persistent gonorrhœa. Persistent gonorrhœa includes subacute and chronic gonorrhœa. The essence of success in treatment hangs on the finding and removal of the cause of the persistency; modern methods assist us in both. A few days' rest from treatmenet is given, so that the signs are not masked by the treatment. At times they are even due to the treatment. A thorough examination should be made, and the discharge examined microscopically. The region of the meatus should be examined carefully for some nidus of disease, such as diseased follicles, etc., and if one be found, it should be destroyed. The urine should be examined by the glasses test for filaments, deposits, etc., and the contents of the prostate and vesicles examined microscopically. The urethra should be examined with the urethroscope for diseased follicles, for patches of infiltration and for old or recent stricture. As a result of all this examination a more or less accurate idea may be obtained of the faults at work in keeping up the disease, and the removal of these faults results in a cure.

The examination may disclose a condition of subacute urethritis. This is a very common condition, midway between the early inflammatory condition of acute gonorrhœa and the later cicatricial period. In this condition the inflammation is still general, but there is already a tendency to localization to a particular tissue, or to a particular region, making it possible to distinguish several clinical varieties. You can see what a field for rational treatment, based on the condition found, is here opened up; but time will not permit me to enter upon the treatment of subacute urethritis. As the condition has points in common with both acute and chronic gonorrhœa, so also

has its treatment features of both. If the examination mentioned above discloses littritis or folliculitis, the diseased follicles must be destroyed. This destruction is brought about by dilatation by sounds, with massage of the follicles on to the sound, or by means of the operating urethroscope, by which the diseased follicles can be seen and destroyed. A probe coated with fused silver nitrate can be protruded through the end of the tube and pushed into the follicle. They may also be destroyed by electrolysis.

Local infiltrated patches are to be treated by local application of a 2% solution of silver nitrate, applied by means of a probe through a urethroscopic tube, or by local instillations of solutions of silver nitrate, or of the organic salts of silver. If recent or old stricture formation is disclosed, dilatation by straight or curved steel sounds, according to the situation is indicated, the full dilatation being completed by means of the Kollmann or similar dilator.

If the trouble lies mainly in the prostatic region, massage, local instillations, and perhaps the dilatation of the posterior urethra by curved steel sounds, followed by a curved Kollmann dilator, are indicated.

Dilatation ensures, in addition to the distension of the tube, the expression of the infected follicles, etc., and the absorption of the fibrous formation.

I do not pretend to have dealt fully with the treatment of persistent gonorrhœa. I have merely indicated the basis of treatment, and treatment on this basis gives satisfaction in a disease hitherto most difficult to overcome. I will conclude with a brief mention of the treatment of the complications of gonorrhœa.

Complications.

For gonorrhœal rheumatism, most reliance was placed by us on rest, vaccines, irrigation and massage (prostate, vesicles and joints), and I used oil of gaultheria externally and internally.

For epididymitis we ordered rest in bed, elevation of the part, suspension of irrigation and antiphlogistine or poultices locally. Later we applied 50% ichthyol, and later still, to reduce the remaining hardness, we applied Scott's dressing and gave potassium iodide internally. The scrotum must be kept supported for a long time afterwards. Irrigation was resumed as the epididymitis subsided, and later massage, very gently at first.

Meatotomy was performed when a small meatus interfered with treatment.

Abscesses were opened on sight.

Balanitis was treated by irrigation with perchloride of mercury, and, if in conjunction with phimosis, by subpreputial irrigation with the same or injections of 10% argyrol.

Phimosis was dealt with by circumcision.

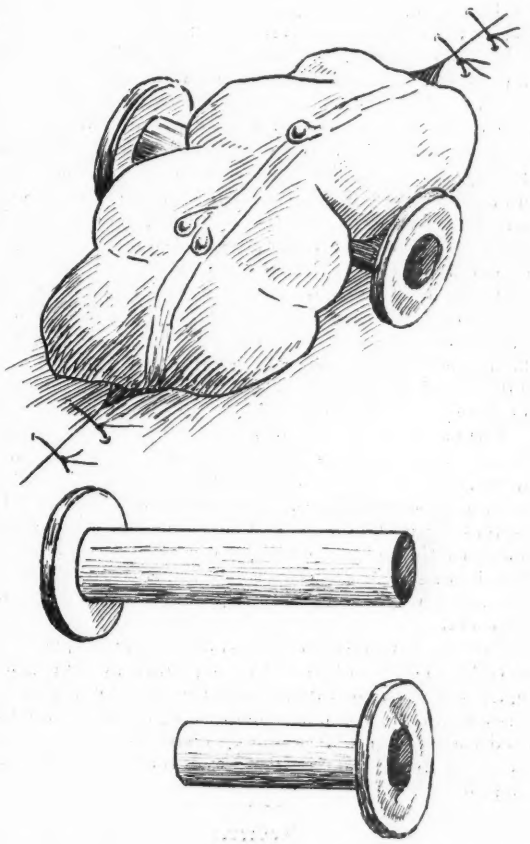
Purulent ophthalmia was conspicuous by its almost entire absence.

INGUINAL COLOSTOMY.

By **R. Hamilton Russell, F.R.C.S., Eng.**,
Senior Surgeon to the Alfred Hospital, Melbourne.

The method of performing inguinal colostomy that I am about to describe has been well tested. I have employed it to the exclusion of all other methods in a large number of cases during the last eight or ten years. A glance at the illustrative figure will render any detailed description almost unnecessary. It will be seen that the principle adopted is that of the glass rod passed through the mesentery so as to maintain the selected loop of bowel firmly outside the abdominal walls. Instead of the glass rod I have used an ordinary glass ligature reel. The method of procedure can be briefly described.

The abdomen is opened on the left side by a muscle-splitting incision similar to that commonly used for an appendix operation, the only difference being that the skin incision and the opening in the muscles are made in somewhat niggardly



fashion for obvious reasons. The large bowel having been found, is drawn out and the highest part of the free loop selected, the lower portion being returned into the abdomen. Then a finger is pushed through the mesentery at a spot free from vessels, and the ligature reel insinuated through the hole made. No sutures will be necessary if the opening in the abdominal wall has been made with a sparing hand. A long strip of gauze is then passed through the barrel of the reel and wound around the whole, passing once or twice under the reel to protect the skin from undue pressure. The bowel may be safely opened at once, if need be, or the opening may be

postponed. In a week or 10 days the reel may be withdrawn, but in order to do this it will be necessary to break away the phlange at one end of it. As this plan has seemed to me rather unworkmanlike, I have had a metallic reel constructed in two parts, as shown in the figure. This has been made for me by Messrs. Allen and Hanbury, of Sydney. The female portion will be first passed through the mesentery and the male portion then pushed home. The strip of gauze will prevent any possibility of the two portions coming apart.

At first sight it might appear that the size of the loop of bowel retained outside the abdominal wall by the reel will be excessive; but it is not so. On the contrary so great is the pull of the mesentery on the bowel that the projecting loop will always sink back until the mucous membrane of the open gut comes to be flush with the surface of the abdomen. The loop of bowel can hardly be brought and held too far out. For this reason, and also on account of its greater security and stability, I prefer the reel to the glass rod. With Ward's stitch (highly esteemed of Moynilian) I was always very dissatisfied, my chief reason being the liability to troublesome suppuration in the track of the suture, which is subjected to considerable drag, and, from its situation, is pecularily prone to gross infection.

The various methods offering for the satisfactory performance of inguinal colostomy may be divided into two classes: (1) Those that aspire to provide the patient with some control over the evacuations; and (2) those that aim merely at the immediate relief of more or less complete obstruction.

Without attempting to discuss the merits and demerits of the various methods, suffice it to say that there must always be a number of cases calling for colostomy in which the judicious surgeon will be content with the more modest endeavour that characterizes the second class; and it is for such cases that I suggest the reel method, as offering substantial advantages over other plans of effecting the same end.

Finally, I would observe that in one respect the metallic reel is inferior to its prototype, the glass ligature reel, in so far as the latter will be almost always found in the instrument equipment should the need for colostomy arise unexpectedly in the course of an operation; and such an eventuality is not uncommon.

Reviews.

BACTERIOLOGICAL METHODS.

The task of placing at the disposal of a medical practitioner who has had little or no training in bacteriology and hæmatology, a compact book containing the information necessary to enable him to employ these sciences in his practice, is one which Dr. D'Este Emery has set himself.[1] It is a task which should never be attempted, for every modern practitioner should have received this training. Had he addressed his book to practitioners who had acquired some practical and theoretical knowledge of bacteria and of blood, his endeavour to give them a handy reference and reminder might serve a useful purpose. In the preface to the fourth edition he stated that the numerous letters of thanks which he had received from practitioners had led him to think that it had proved useful. The untrained practitioner would surely be a bad judge of the value of the application of this kind of knowledge culled from an elementary book. We hold the opinion most strongly that the practitioner who is unable to employ bacteriology and hæmatology in his practice, is as ill-equipped as the practitioner who does not know how to use his stethoscope, his clinical thermometer and his scales.

The fifth edition of Dr. D'Este Emery's book differs but little from the fourth. Those parts in which bacteriological methods are dealt with, are generally good and the greater part of the information contained is well set out and reliable. The general plan of the presentation savours somewhat of an easy guide to a difficult science, and consequently there are important omissions and many inevitable misdirections. The text is excellently amplified by clear coloured and black and white illustrations, which enhance the value of the publication. Judged as a whole, it may be said that the bacteriological part is eminently suited as a laboratory guide. The directions for making up solutions and for performing some of the more important operations in the examination of fluids, cultures, etc., will be found very useful. In some instances the selection of methods from among a large number, as in the case of the Wassermann test, is open to criticism. Exception may also be taken to the teaching that "the diagnostic value of the examination" (the estimation of the opsonic index) "is considerable." The description of the technique, however, is excellent. The usual error is introduced in the process of estimating the number of phagocyted bacteria. This is that too few cells are counted. It has been shown over and over again that the results obtained when the bacteria contained in 75 cells are counted, are quite different to those obtained when the germs phagocyted by a thousand leucocytes have been enumerated. In connexion with blood counts, Dr. D'Este Emery even recommends the estimation of the average number of leucocytes per field, a method which is extremely unreliable. On the other hand the greater part of the hæmatology is well done and contains much useful, elementary information.

[1] Clinical Bacteriology and Hæmatology, for Practitioners, by W. D'Este Emery, M.D., B.Sc., Lond. Fifth Edition; 1917. London: H. K. Lewis & Co., Ltd. Demy 8vo., pp. 210, with 11 plates and 55 illustrations. Price, 9s. net.

THE LATE LIEUTENANT-COLONEL W. W. HEARNE.

Lieutenant-Colonel A. Graham Butler, D.S.O., writes as follows:—

You will, I have no doubt, put in the Journal some special note of the late Colonel Hearne, A.A.M.C., D.S.O., A.D.M.S., 5th Australian Division, who was killed in action on the 17th of October, at one of his regimetal aid posts, which, as was his wont, he was visiting, to hearten his young officers and to assure himself that all was well. May I, as one of his friends who honoured him greatly and will miss him much, be allowed to add to what has been said some few words more, which I know accord with what is thought and spoken out here by all who know him well. If I repeat what has already been said, it may yet perhaps make more clear how much we feel we have lost through his death. And this, indeed, is what I wish to emphasize; for he was a man who has played such part and borne himself in such wise as to make all feel that there is gone a spirit so fine as will not easily be replaced in the Medical Service, and will not be forgotten!

He was most steadfast and determined in his devotion to his duty; and was ever most ready and pleased in looking for it in places of danger, if he could thereby encourage and assist his officers, and obtain first-hand knowledge of conditions. To accompany him to the forward positions or through a shelled area showed to one a man of self-control and courage of unusual quality. He was, withal, a staunch and a happy friend, who made one feel that it is worth while to have a high endeavour, and he was happy in giving honour to others, and appeared always to esteem others better than himself. He had, it is true, peculiarities and reserves which at times produced impatience in those who did not know him well; for while he was always ready to hear and to judge, he did so with great deliberation, and often held to his own opinion. But no one was with him long without realizing his singleness of purpose and his great desire to know and do his duty.

The Australian Army Medical Service is indeed the poorer by his death; but it is the richer for having the memory of this gentle and lion-hearted man.

The Medical Journal of Australia.

SATURDAY, JANUARY 5, 1918.

The Medical Branch of the Army.

With the decision of the people to resist the inevitable until measures fitted to the situation are enforced upon them, there arises a series of problems which cannot be solved until the way out of the dilemma has been found. In October, 1916, the Prime Minister made the fatal mistake of asking the community in the Commonwealth to decide whether it would conscript itself for the purpose of making its utmost effort in the cause of the Empire. In December, 1917, he sought to obtain a reversal of the former decision, by modifying the proposals and by giving certain contingent promises. Events in Europe demand the supreme effort of all who call themselves British. There has been much spoken recently concerning the reliability of the news published from the seat of war. Notwithstanding the restrictions placed upon the publication of news by the Defence of the Realm Act (affectionately known as "Dora"), there is ample evidence that Germany, at the end of three and a half years of war, is still a most formidable foe and that strenuous fighting and masterly strategy will be needed before she can be overcome. These matters, however, lie outside the province of a medical journal. We have to concern ourselves with the non-combatant duties of the Army and we are essentially within our province in endeavouring to analyse the position as it applies to the medical profession. When the Federal Committee of the British Medical Association in Australia referred to the members of the medical profession the question whether they should demand of the Federal authority that all members of the medical profession should be enrolled for enlistment in the Army Medical Corps, the objection was raised by a few that they would not agree to differential treatment, although they were in favour of compulsory service for the whole community. The function of the medical profession differs fundamentally from that of the rest of the community. We have pointed out repeatedly that only if the medical profession is properly organized and its members distributed to perform those duties they are best equipped for, can the needs of the Army and of the civil population be met. Compulsory enrolment for enlistment necessarily means a mobilization of the whole profession. Our colleagues in New Zealand have demanded this, and in Great Britain a form of mobilization has been effected. It is therefore a prime duty of the medical profession in Australia to press for its mobilization, so that the difficulties of the future may be anticipated and nothing may be left to chance.

Since we have the assurance of an overwhelming number of medical practitioners that they are prepared to do all that lies in their power to help the Empire in its hour of trial, it is essential that adequate steps shall be taken to ensure that the knowledge laboriously collected by scientists throughout the world, shall be available for our soldiers. In the past our soldiers have suffered from the lack of skilled orthopædic treatment from the moment it is required until their discharge. Better results would have been achieved had there been a neurological service, under the direction of one of our leading neurologists. The absence of a properly equipped bacteriological laboratory with each division, under the care of a trained bacteriologist, has been responsible for much wrong diagnosis and consequent wastage of fighting strength. The function of the medical profession in war is not limited to surgery; there is much to be done in other directions. But unless each special branch of medicine is entrusted to a competent expert, and unless the work is developed along recognized lines, good results cannot be secured. It is immaterial whether the organization is undertaken in Australia or in the several theatres of the war, provided that the necessary co-ordination exists between those in authority at home and those in authority abroad. The defects of the past have been due to a combination of difficulties and unforeseen circumstances. The experience of three and a half years of war suffice to teach us how these manifold difficulties can be

overcome and what the problems of the coming year are to be. The aim of the Australian Army Medical Service must be to be entirely self-contained, efficient and complete. With judicious selection of medical officers for the many positions to be filled, this aim should be attainable. There should still be sufficient medical knowledge and surgical skill left in Australia to serve the requirements of the civil population.

THE LAW AND MEDICINE.

From time to time the medical profession receives a rude shock from coroners, magistrates and even judges, when matters involving the interpretation of pathological signs have to be investigated. It is often an extremely difficult task to assess at its proper value the technical evidence given at an enquiry or at a trial by a medical practitioner, if the magistrate, coronor or judge has not had the benefit of training in medicine, and if he has not the assistance of a medical assessor. Experience teaches that even a medical coroner is occasionally not well versed in pathology and arrives at a mistaken conclusion after he has heard the evidence. Much of the difficulty arises as a direct result of the manner in which the medical evidence is sought and given. A medical practitioner, who is not an expert pathologist, may give evidence in such a way that the essential facts may not be elicited, and undue consideration may be given to irrelevant points. In other cases the coroner or magistrate may formulate his questions in such a way that the medical witness is induced to give misleading evidence. Again, it is by no means uncommon for the evidence of a medical witness to contain statements of fact and expressions of opinion so hopelessly confused, that no one but a well-trained pathologist would be able to differentiate between them. Dr. William A. Brend gives in *The Practitioner* of October, 1917, some highly interesting details of a death which occurred in a large town in England and which was the subject of two enquiries, one by a coroner and one by an arbitrator. The cause of death remains a mystery to the present day, although some of the circumstances are strongly suggestive. A man aged 34 years, in apparently good health, retired to his room at about 11.30 one night and on the following morning was found dead; the door of the room was locked and the key was lying on the floor. The man was partly dressed in female attire. His brother, who was one of the first to see the body, arrived at the conclusion that the theatrical stays which the deceased was wearing, were extremely tight, and cut them off. The doctor stated in evidence that death had been caused by asphyxia produced by the tight stays, although the signs of asphyxia were not described by him. In the present issue we publish an interesting communication by Dr. W. F. Litchfield on the gross signs of asphyxia produced by fibrinous exudation within the bronchial tree as compared with asphyxia due to the exclusion of air by obstruction in the upper air passages. In Dr. Brend's case there were certain concomitant circumstances which revealed that the explanation given for the wearing of female attire was not the correct one. It was suggested that the deceased was to take part in some fancy dress entertainment and was trying on his fancy dress. Dr. Brend points out that there was reason to regard the act as a sign of sexual aberration. The coroner failed to investigate the death from the point of view of a possible suicide or even from that of the deliberate act of some second person. No enquiry was made concerning the contents of the stomach or intestines; the odour of the breath was not even smelt, with the view to the detection of anything characteristic. The stays had been destroyed immediately after the inquest, so that at the arbitration, no evidence of their form or kind could be taken. This case illustrates the defects of our methods of holding inquests and magisterial enquiries. We have had many instances of inquests in Australia resulting in a verdict, obviously not in keeping with the facts. It is in the interests of the community that all enquiries into the cause of death and investigations of the circumstances of alleged foul play should be conducted in such a manner that the true significance of facts, as elicited by scientific observers, should be recognized and their bearing on the case properly estimated. We agree with Dr. Brend that when the coroner or magistrate is not a medical man, he should have the assistance of an expert medical assessor.

THE GERMICIDAL ACTION OF ULTRA-VIOLET RADIATIONS.

It is well known that the radiation from the sun or from a source of light is of a complex nature. Various optical devices serve to separate the rays from one another so that their different effects may be conveniently studied. If the radiations are directed through a narrow slit and the beam of rays passed through a prism, they are spread out as a band or spectrum. At one end of the band lie those rays which travel more slowly and have a relatively long wave-length, while, at the other end, are the rays which move more quickly and are possessed of a short wave-length. The radiations of longest wave-length have most heating capacity, those somewhat shorter excite the sensation of light by their stimulating action on the retina, while the rays of shortest wave-length provoke a variety of chemical changes.

Rather more than twenty years ago, the well-planned experiments of Marshall Ward made it evident that certain portions of the radiation from the sun or from an electric lamp possessed greater germicidal action upon micro-organisms than the remainder. They showed that the part of the visible spectrum of the sun or of an electric arc, lying around the Fraunhofer line G in the violet, prevented bacterial multiplication, while the infra-red, red and green portions of the spectrum had little, if any, lethal effect upon germs. Recently Drs. C. H. Browning and S. Russ have devised a simple method[1] for determining what portion of the ultra-violet spectrum is effective as a germicide and for measuring the wave-length of the radiation at which the antiseptic action ceases. A glass plate is covered with a gelatine or agar film. Instead of being impregnated with a silver salt as is the case with a photographic plate, an emulsion of bacteria is suspended in the film. If such a plate is exposed to a spectrum, the germicidal action forms a kind of image which can be developed by incubating the plate. A copious growth occurs where the germicidal rays have not fallen. The incubated plates may be used as photographic negatives for producing positive contact prints, or they may be photographed by reflection of light from their surfaces.

The ultra-violet portion of the spectrum is of limited extent when a glass prism is employed to refract the different rays. The rays of short wave-length are absorbed in the glass. The introduction of the quartz spectrometer has rendered it possible to study more of the ultra-violet region. The spectrum of this instrument extends from 7,000 to 2,100 Angström units, a range almost double that of the ordinary spectrum. The visible region of the spectrum commences at 3,800 A. u. and extends to the upper limit of the radiation. It is necessary for the investigation of the action of any radiation to have some ready means of measuring the wave-length of any part of the spectrum. This can be easily done if an electric arc is used as the source of the radiation and if the electrodes are made of a metal yielding a characteristic line spectrum. In this study, Drs. Browning and Russ have made use of electrodes of pure tungsten, the arc spectrum of which consists of a series of lines closely packed together and extending to 2,100 A. u. in the ultra-violet region. When prints are made of the inoculated and incubated plates which have been exposed for more than five minutes to the spectrum in the same way as a photographic plate, the line spectrum can be well seen in the region of germicidal action. The limits of this action appear sharply defined, so that the effective radiations can be determined at once by comparing the prints with those of a spectrum of tungsten on which the wave-lengths are noted in Angström units. The pyogenic microbe, *Staphylococcus aureus*, is affected in the region from 2,380 to 2,940 A. u. with 5 to 20 minutes' exposure. As the time of exposure is prolonged, rays with a wave-length of less than 2,380 A. u. become effective, but the upper limit of action does not alter. Similar results have been noticed with *Bacillus coli communis*, *B. typhosus*, the meningococcus and an acid-fast bacillus (Timothy grass bacillus).

It had been learned previously that materials like serum albumin and egg albumin have well-marked absorption bands extending from 3,180 to 2,100 A. u. The human skin in layers of 0.1 mm. thick is also practically opaque to rays of similar wave-length. Photographs have, therefore, been taken of the absorption spectra of bacterial emulsions by placing them before the slit of the spectrometer, and it has been found that there is selective absorption in the region from 2,960 to 2,180 A. u. The correlation between the germicidal action of a particular portion of the ultra-violet radiation with an enhanced degree of absorption of such radiation by the organisms does not explain the bacteriological effect, but it leads the enquiry from biological to physico-chemical science. It may be recalled, in this connexion, that Grotthus in 1818 stated that only those rays which are absorbed, can produce chemical change.

We are now aware that there are two regions endowed with physiological qualities in the ultra-violet, a part extending from 3,800 to 2,960 A. u., capable of penetrating a considerable thickness of skin but with low physiological activity, and another part stretching from 2,960 to 2,100 A. u., with little power of penetration of living cells but possessed of germicidal activity. When an infected wound is exposed to an adequate source of ultra-violet radiations, the pathogenic organisms on the surface will be killed, but the organisms at a depth will not be killed as the rays will not reach them. As there is some clinical testimony that deep-seated infections have benefited by treatment with ultra-violet radiations, the improvement cannot be due to direct germicidal action upon the infecting bacteria.

[1] *Proc. Roy. Soc.*, London, B, Vol. 90, p. 33, October, 1917.

A CAMP DANGER.

In March, 1916, we had reason to call attention to a custom which we signalized as an unwholesome one which was at that time prevalent at some of the military camps in Australia. Men were required to fill their cups by dipping them into buckets contain-

ing tea and coffee. We were gratified to learn shortly after the publication of the article that the buckets had been replaced by urns or other vessels from which the beverages could be poured. Our attention has again been drawn to a recurrence of the practice. Soldiers in training at Liverpool Camp have to dip their cups into the tea or coffee buckets, instead of receiving these hot beverages poured out in a sanitary manner. The custom is obviously dangerous, since the cup is liable to convey pathogenic bacteria from the mouth of the user to the contents of the bucket, and in this way to infect the whole supply. Apart from the risk attached to the practice, it is a very unsavoury one, and for both reasons should be discontinued at once

THE SEPARATION OF THE PLACENTA.

During the first half of the nineteenth century, but little accurate knowledge concerning the histology and physiology of the decidua was possessed by obstetricians. Matthews Duncan, Dohrn and others attempted to separate the chaff from the corn in the 'sixties. Matthews Duncan was able to show in 1868 that the prevailing conception that the entire mucosa was cast off, was not supported by fact. A few years later Friedländer published an accurate account of the structure of the decidua and evolved the doctrine that its separation took place in the compact layer, the uterus retaining a thin covering of this layer, as well as the entire spongy layer. Langhans was fortunate enough some years later to obtain a uterus which still contained its decidua, and from this specimen and from other observations he claimed that the separation took place normally in the spongy layer. It will be noted that this view received much confirmation and has been accepted by the vast majority of obstetricians of the present time. Few pathologists, however, have had an opportunity of noting the condition of the lining membrane of the uterus immediately after the birth of the fœtus in a considerable series of cases, and consequently the teaching is largely based on the uncontrolled findings in a few isolated cases. Professor J. Whitridge Williams has made a systematic study of the uteri gained at the Johns Hopkins Hospital during the past twenty years after supravaginal amputation.[1] During this period delivery by Cæsarian section, with removal of the uterus and extraperitoneal treatment of the stump, has been practised fifty times. In forty of the specimens the level of separation could be studied. It took place seven times in the spongy layer and 28 times in the compact layer, while in the remaining five cases the separation took place in an irregular manner, in some areas in the compact and in others in the spongy layer. In certain instances the placental site was recogized only when the organ was submitted to microscopical examination. In these cases the recognition of so-called giant decidual cells, cells which the majority of observers now regard as wandering fœtal cells derived from the chorionic epithelium, is relied on to determine the placental site. In association with these fœtal cells, certain changes have been noted in the vessels of the basal decidua. Professor Whitridge Williams shows that thrombosis, when it occurs, is a secondary process, consequent on the cutting off of the circulation. The teaching that the thrombosis occurs as a primary process with the object of arresting hæmorrhage, is contradicted by the evidence of his specimens. On the other hand, he describes fibrinoid changes affecting both the arteries and the veins. The lumen of the vessels may be free or may be occupied by cells or by hyaline material. It would appear from the uteri examined that the separation is not brought about by a retro-peritoneal hæmorrhage. The festooning of the fœtal membranes and of the decidua, which has been described long ago by Dohrn, is described minutely by Professor Whitridge Williams, as he recognizes in it the cause of the detachment of the after-birth. The muscular wall of the uterus prior to birth is extremely thin, in contrast to its bulk during the first half of pregnancy. After the expulsion of the fœtus, the muscle contracts and becomes thick and bulky. As the wall contracts on the lessened contents of the uterus, the *decidua vera* and chorion are thrown into delicate waves or festoons, while the amnion, being unable to accommodate itself to the altered conditions, becomes puckered. The free surface of the amnion thus forms numerous papillary excrescences. Relatively little of the decidua remains in contact with the mucular coat, but as can be seen with singular clearness in the sections, the triangular masses of decidual tissue enclose many glands. These glandular spaces project into the interstices between the muscular bundles. From these appearance it becomes obvious that while there is an attempt on the part of the placenta to accommodate itself to the diminishing size of its area on the uterine wall, immediately after the expulsion of the fœtus, this attempt is accomplished by a sacrifice of the firm attachment of the true decidua to the muscular wall. This study has undoubtedly cleared up some of the little understood points in connexion with the third stage of labour, and calls attention to those around which mystery still adheres. These matters are of importance, and demand the consideration of every practitioner who undertakes to deal with abnormal processes in parturition.

[1] *Bulletin of the Johns Hopkins Hospital*, November, 1917.

Naval and Military.

CASUALTIES.

The 375th list of casualties, which was issued to the public on December 21, 1917, contains the names of two medical officers. Captain Geoffrey Howard Barham Black has been wounded (gas, severe) and Captain Cyril Checchi has been wounded, but is remaining on duty. In the 376th list, which was issued on December 24, 1917, it is announced that Major Thomas James Frizell died of wounds (see *The Medical Journal of Australia*, December 15, 1917, page 498). Dr. Charles Cecil Humphries is reported to be seriously ill.

Captain Charles Joseph Oliver met with a serious accident at the Seymour Camp on December 22, 1917. He was thrown from his horse. It is stated that he sustained a fractured skull. He was removed to the No. 5 Australian General Hospital, St. Kilda Road, and succumbed to his injuries on December 29.

HONOURS.

The following records have been republished in the *Commonwealth of Australia Gazette*, No. 219, of December 20, 1917, from the *London Gazette* of August 2 and August 24, 1917:—

Captain Noel Edmund Barton Kirkwood, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He worked continuously for ninety hours attending wounded under heavy shell fire. He set a most inspiring example to those around him.

Major Rupert Iggulden Furber, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He had charge of an advanced dressing station for five days, during which it was under heavy shell fire most of the time. He displayed the greatest ability and devotion to duty in organizing the dressing and evacuation of a large number of the wounded, on several occasions helping to bring them in himself.

Lieutenant-Colonel John Smith Purdy, Army Medical Corps.

For conspicuous gallantry and devotion to duty. Although continually under shell fire for seven days, he exercised close personal supervision over the evacuation of the wounded, and by his own example of courage and disregard of danger he animated all ranks with a similar attitude of mind. His work during preliminary preparations displayed the same untiring energy and devotion to duty.

Captain Jack Rowland Stanley Grose Beard, Army Medical Corps.

For conspicuous gallantry and devotion to duty on many occasions. He carried out his duties in attending to the wounded under the most trying and difficult circumstances under heavy enfilading artillery fire, afterwards refusing to leave his aid post, although it was blown in and he was buried. On the following day he went out into a hostile barrage and brought in two stretcher-bearers who had been wounded. At all times his fearless example had the most inspiring effect on his medical staff.

Captain Wendell Inglis Clark, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He remained on duty for nearly three days with only four hours' rest, attending to over 300 cases of wounded, and working mostly under extremely heavy fire. On many previous occasions he has done excellent work whilst under fire, displaying the greatest courage and devotion.

Captain Laurence Bedford Elwell, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He personally organized, with great ability and entire disregard of his own safety, the evacuation of wounded along a route which was under direct enemy observation and subjected to heavy rifle and machine gun fire. On another occasion he twice visited an aid post under intense hostile barrage, to assist the officer in charge, displaying, as on all other occasions, the utmost fearlessness and devotion to duty.

Captain Raphael Leo Kenihan, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He established the most forward regimental aid post in his division, where he attended to the wounded under heavy shell fire the whole time. Although himself slightly wounded, and compelled to shift his post twice by hostile shell fire, he continued to attend all his cases with the greatest care and devotion, saving many lives by remaining in his forward position, and setting a magnificent example.

Captain Keith Sheeley Parker, Army Medical Corps.

For conspicuous gallantry and devotion to duty. He went forward under heavy artillery and machine-gun fire, and established his aid post in a shell-hole, where he worked under most adverse conditions for five days without rest, attending the wounded of many units. He was under shell fire the whole time, and set a splendid example of devotion to duty.

Captain Harold Powell, Army Medical Corps.

For conspicuous gallantry and devotion to duty in continually working under heavy fire and the most adverse conditions, with complete disregard for his personal safety. As Medical Officer he is invaluable to his battalion, not only in regard to his assistance in keeping the men medically and physically fit, but by his example of coolness, courage and good humour when under fire.

Captain Fritz Peter Max Solling, Army Medical Corps.

For conspicuous gallantry and devotion to duty. Although under constant shell fire for a fortnight, he continued to attend to the casualties of his own and other units, on one occasion for a period of twenty-four hours without a break. During a heavy hostile gas attack he displayed the utmost devotion and disregard of danger.

Captain Cedric William Whiting, Army Medical Corps.

For conspicuous gallantry and devotion to duty when in charge of stretcher-bearers. He displayed the greatest ability in keeping touch with the aid post and in clearing the wounded, twice taking his bearers through a heavy barrage for that purpose. His pluck and determination were beyond all praise.

Captain Roy Coupland Winn, Army Medical Corps.

For conspicuous gallantry and devotion to duty when in charge of stretcher-bearers. He constantly patrolled the bearer line under very heavy shell fire, maintaining communication between aid posts and dressing stations, and on one occasion he took a squad across the open through an intense barrage to an aid post in order to relieve a temporary glut of wounded. He was twice wounded, the second time severely, and his gallant conduct was the means of saving many lives.

Captain John Smythe Yule, Army Medical Corps.

For conspicuous gallantry and devotion to duty whilst under heavy shell fire. Although gassed early in the operation he remained continuously on duty for two days, during which time 450 cases passed through his hands. He has shown great gallantry on numerous previous occasions.

THE BABY BONUS.

The Federal Treasurer has issued his annual statement dealing with maternity allowances granted during the twelve months ending June 30, 1917. The total number of bonuses paid in the Commonwealth was 132,407. In 86,565 instances the allowance was paid to mothers who had been attended by doctors, and in 45,842 instances to mothers who had not been attended by doctors. The number of claims rejected was 459. Of these, 195 were rejected because the claim was not made within three months of the birth, 135 were rejected because the children were not viable, 52 because the mothers were Asiatic or aboriginal natives, 35 because the births were still births not attended by doctors, 30 because the claims were withdrawn or not completed, 11 because the mothers were not inhabitants or intending inhabitants of the Commonwealth, and one because the claim was made in respect of a twin birth.

The number of claims was greater in 1914 than in 1915, and less in 1916 than in 1917. The number of rejections was greater than in all previous years. It appears that in the four years and eight months since the payment of maternity allowances commenced, 1,282 claims have been rejected in New South Wales, 551 have been rejected in Victoria, 488 in Queensland, 256 in South Australia, 239 in Western Australia, 106 in Tasmania and nine in the Northern Territory. It will be noted that relatively the number of rejections in New South Wales and in Western Australia is extremely high, while the number of rejections in Victoria is very much lower than that in any other State. The total expenditure in claims since the inception has been £3,103,390, while £55,628 has been spent on administration.

After a long delay, His Excellency the Governor of Queensland gave the vice-regal consent to the *Opticians Bill* on December 3, 1917.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(1) Signs of Intercranial Pressure.

William Sharpe has succeeded in producing hydrocephalus in puppies by blocking up the aqueduct of Sylvius (*Archives of Ophthal.*, 1917). Five hours later the retinal veins became dilated, the nasal veins earlier than the temporal; four hours later the nasal and then the temporal margin of the optic disc became blurred. In twelve to twenty-eight hours the details of the discs could not be seen, and a measurable swelling could be observed with the ophthalmoscope—"choked disc." One dog, unrelieved by a drainage operation, developed secondary atrophy in nine weeks. Eight dogs were drained by a sub-temporal operation, and in all but three the pressure was relieved and the choked discs subsided in the reverse order of their occurrence. The terms "papillitis" and "optic neuritis" imply a condition of inflammation due to infective and toxic causes, as in nephritis, diabetes and meningitis; whereas œdema of the disc is due to the mechanical factor of increased intracranial pressure. Three stages can be recognized: blurring, papillœdema and choked disc, and it is important to recognize the early stages. An interesting syndrome is found in some frontal tumours, when direct pressure causes optic atrophy on the same side and choked disc on the other. Brain abscesses, like infiltrating gliomata, often do not cause fundus changes, unless the ventricles are blocked, or an infective and toxic meningitis is also present. Intracranial hæmorrhage following skull fracture rarely produces a measurable choked disc. The condition that would lead to it causes death before it can develope. Choked disc may be present in cases of large hæmorrhage which formed slowly, usually that following rupture of the middle meningeal. Ophthalmoscopic examination in these cases is important to detect early evidence of pressure, which may indicate a decompression operation. It is dangerous to wait till a choked disc occurs. In cases of central spastic paraplegia in children, due to hæmorrhage at birth, ophthalmic examination is important, to reveal indications for operation. The pressure of the central spinal fluid at lumbar puncture should also be measured by a special mercurial manometer, to confirm the fundal findings. Hydrocephalus, of the internal type, due to blockage of the cerebro-spinal fluid in the ventricles, can produce choked discs of extreme degree. Hydrocephalus, of the external type, due to blockage of the escape of cerebro-spinal fluid from the cerebro-spinal canal, rarely causes measurable papillœdema.

(2) The Theory of Vision.

F. W. Edridge-Green's theory of vision is as follows. Light falling on the rods liberates their visual purple, the photo-chemical decomposition of which stimulates the cones, whereby visual impulses are conveyed to the brain (*Brit. Journ. Ophthal.*, July, 1917). The wave-length of the light determines its colour, but the power of discrimination varies with individuals. Every aberration of function, according to this theory, is represented by a disease of the eye, hitherto unexplained. The fovea, when cleared of sclerotic, choroid and pigment, is seen as a small basin with four canals leading into it, like a star fish. These canals assist in the circulation of lymph sensitized by visual purple. They are seen ophthalmoscopically in central tumours and in some cases of high myopia. Movement of the eye is one way of promoting flow of sensitized visual fluid into the fovea, and hence we have an explanation of nystagmus. Amblyopia with no ophthalmoscopic changes may be due to disturbance of the function of the rods, and the removal of the cause, some septic focus, will result in a cure. Visual purple formed under the influence of a very bright light is more sensitive than normal to the red end of the spectrum, and hence we have erythropsia. Night blindness is due to a defective power of the rods to respond to feeble illumination. Quinine has this toxic effect on the rods. Peripheral illumination is necessary to work in comfort without headache, because it is by peripheral stimulation of the rods that a supply of visual purple is obtained for the fovea. It is better to read in a well-lighted room than by a reading lamp.

(3) Retino-choroidal Rupture.

It has been observed that rupture of the choroid alone is followed by the formation of a limited amount of fibrous tissue, but when both choroid and retina are ruptured, large masses of fibrous tissue are formed, and a condition of *retinitis proliferans* is produced. T. Herbert Parsons offers an explanation of this (*Brit. Journ. Ophthal.*, August, 1917). Hæmorrhages at the periphery of the fundus are not usually followed by formation of fibrous tissue, firstly because they are small, and secondly because there is very little mesoblast in this situation. Hæmorrhages near the disc are more usually followed by proliferation, as they are larger and there is more abundant mesoblastic tissue in the vicinity. In cases of retino-choroidal rupture there is considerable extravasation of blood, which is forced up into the vitreous and sets up a reaction in the mesoblastic tissue, with the resulting *retinitis proliferans*. If this suggestion be correct, it argues against the removal of foreign bodies by an incision through sclera, choroid and retina. Removal by the anterior chamber should be less likely to result in the formation of new fibrous tissue, and subsequently to retinal detachment.

(4) Sarcoid of the Eyelid.

George Derby describes a case of sarcoid of the eyelid in a young woman of 25 years (*Archives of Ophthal.*, July, 1917). The growth was flattened and lobulated, and measured 3 cm. in length by 4 to 6 mm. in breadth. Its colour was deep yellowish-red. It was removed. It recurred in three months, and was excised a second time. Microscopically, the growth appeared to be a conglomeration of tubercles, containing giant cells and often needle-like crystals. Kaposi originally used the term to include lymphodermia, *mycosis fungoides*. Boeck of Christiania, in 1899, employed the term in its present sense. It begins either as diffuse œdematous reddening of the skin, or as one or more small nodules. They do not ulcerate and are commonest on the face and shoulders. The ætiology is obscure, and it is probably not tubercular. There is evidence to regard it as a general disorder, the cutaneous involvement being secondary. Arsenic has almost as specific action, and X-rays have been found useful.

(5) Fundus Lesions in War Nephritis.

J. Jameson Evans examined the fundi in 100 cases of trench or war nephritis, and found lesions in 57% (*Brit. Journ. Ophthal.*, August, 1917). The fundus changes are slight in degree, and are not yet proven to be the result of the war nephritis. Further observations are necessary to establish causal relations. Lesions were found in the optic nerve and retina in 39 cases. In 22 cases the disc was hyperæmic and slightly œdematous, and in eight cases the disc was pale. In one patient only was seen a typical albuminuric retinitis with hæmorrhages. He was 56 years of age and evidently had Bright's disease. In four cases were seen fine dotted changes in the macular region. The choroid was involved in 34 cases, some doubtfully pathological. Some had depigmentary changes at the periphery or in a sector of the globe; others had discrete orange-coloured spots. Five cases showed guttate changes in the macular region like Tay's choriditis; and the same number had slate-coloured spots near the macula, some of them along the course of a vessel. The changes observed seem to point to a toxic or infective origin.

LARYNGOLOGY AND OTOLOGY.

(6) War Injuries and Neuroses of Otological Interest.

H. J. Marriage, from his own notes and those supplied by Arthur Cheatle, E. D. D. Davis, Somerville Hastings, Pike, W. S. Syme, Logan Turner, J. S. Fraser and W. J. Porter, deals with war injuries and neuroses of the ear (*Journ. Laryn., Rhin and Otology*, June, 1917). I. (*a*) Auride: Plastic operations will often save extensively damaged organs owing to the excellent blood supply; perichrondritis, the principal complication, may call for excision of the cartilage. (*b*) External meatus: The cartilaginous part is the more frequently injured. There may be facial nerve involvement through direct in-

jury by missile, or from concussion. Complete stenosis of the meatus, causing some deafness, commonly results if the injury is extensive, and there may be internal ear- deafness. II. Middle ear: Ruptured membranes often follow bursting of a bomb or high-explosive shell in a confined space, the perforations, of all sizes, being usually found in the lower half of the *membrana tensa*. Marked deafness is the commonest symptom; in some cases there is temporary loss of consciousness, slight bleeding from the ears, and rarely tinnitus and slight vertigo. Air-conduction is diminished. No complete loss of hearing has been reported. Non-suppurative cases heal in one to three months. Infections occur in 30% of cases, the majority of which heal well with good recovery of hearing. Mastoid involvement is very rare. The usual treatment is disinfection of the meatus and plugging with wool. Syringing and the instillation of drops should be avoided. Hæmorrhages into the middle ear, with an intact drum, are often absorbed, leaving no untoward sequelæ. III. Internal ear: (*a*) Direct injury to the labyrinth by a missile is generally fatal. (*b*) Indirect injury occurs in fractured skull from falls, blows, or bullet wounds. Syme and Fraser state that force applied to the side of the head, in the direction of the petrous pyramid, produces a longitudinal fracture, generally along the roof of the middle ear cleft, the labyrinth capsules, as a rule, remaining intact. If the force falls on the back of the head a transverse fracture, at right angles to the long axis of the pyramid, occurs, always injuring the labyrinth, generally through the vestible. Total deafness, disturbed equilibrium and loss of cochlear and vestibular functions ensue. If the labyrinth is injured cerebro-spinal fluid escapes; if not injured there is no such escape, but deafnes is due to hæmorrhage into—or tearing of—the eighth nerve. (*c*) Concussion deafness may be due to constant gun-firing day after day, which may cause a slight amount of permanent deafness, or may be due to an explosion near the patient of a high-explosive shell, causing often temporary unconsciousness and deafness; the latter is generally very severe, but is never known to be absolute. Intense deafness and headache may be the only symptoms, but sometimes tinnitus, nausea and vomiting are present. As a rule only one ear is affected; both may suffer if a shell bursts just in front of or behind patient. The Rinne test is positive, air and bone conduction markedly diminished, but the drums are normal. By rest in bed, with bromides and later strychnine, hearing is restored in the majority of cases; if no improvement is seen in six weeks, the outlook is bad. Hearing may return, while the tinnitus persists. IV. Psychic deafness is generally bilateral. It is commonly seen in those who have suffered severe shocks, but have no visible injury. Deafness is, as a rule, absolute, and accompanied by other nervous symptoms and signs, *e.g.*, loss of voice, tremors, narrowed field of vision, irregular paralyses and areas of anæsthesia. Milligan and Westmacott attribute the condition to "a temporary suspension of neurone impulses from the higher centres of the central nervous system to the periphery." Countershock, rest and massage, anæsthetization, or administration of asafœtida and valerian may effect a recovery. The condition must be differentiated from malingering by a thorough examination.

(7) Non-Surgical Treatment of Accessory Sinusitis.

The employment of negative and positive pressure for evacuating and medicating the accessory sinuses is advocated by W. A. Wells (*Laryngoscope*, May, 1917). The nasal cavity is first cleansed by warm saline irrigation, or by steam inhalations, containing a small amount of menthol in alcohol and a few drops of chloroform, which liquefy thickened secretions. The application of cocaine and adrenalin, limited strictly to the region of the ostia, will then reduce sinus obstruction due to acute inflammatory swelling. A frontal sinus probe is often useful for clearing the infundibulum. It may be necessary to cut away portion of the middle turbinate, ablate polypoid growths, remove septal spurs, or correct deviations to obtain permanent results. Secretions may then be aspirated by a strong suction bulb, such as Mucks' used in the Max Halle clinic. It is connected by a rubber tube to a glass reservoir, the tip of which fits snugly into the anterior nares. If the patient swallows or says "K, K, K," just as the pressure bulb is released, negative pressure is exerted on all the sinuses, and inspection immediately afterwards will often give a clue to the affected chamber. Lewis Coffin's apparatus, by allowing the operator to shift the pressure from negative to positive suddenly, delivers medicated vapours to the partially vacuumized interior of the sinuses. Coffin employed carbolic acid and iodine preparations (iodex, ioden, petrogen, etc.), and an oil loaded with Bulgarian bacilli. The author used in the recent cases a preparation containing salol 1%, camphor menthol 2% in benzoinol, and in the older cases camphorated phenol 2% in a 10% preparation of iodine. Brilliant results are claimed for these methods.

(8) The Snaretome.

An instrument has been perfected by Jacob Braun for tonsillectomy claimed to combine the advantages of the tonsillotome and the snare without their defects (*Laryngoscope*, July, 1917). A Sluder's guillotine, the blade of which is blunt, and does not quite reach the distal end of the fenestrum, has attached to its shaft opposite the handle, the cannula of a snare, the wire loop of which lies concealed in a groove around the fenestrum. The instrument is introduced behind the tonsil, as in Sluder's method, and then brought forward against the alveolar eminence of the mandible, thus forcing the tonsil through the fenestrum. The blade is then pushed home, strangling the pedicle. The snare loop is next tightened with the other hand, the action automatically releasing the snare from the guillotine, which is withdrawn, and the snare secured by a spring to the upper bar of the gag (Jening's). The guillotine is now attached to another snare, and the operation repeated on the other tonsil; then, by slowly turning the travelling-screws of the snares, the enucleation of both tonsils is completed. Braun affirms that a dry and unobscured operative field is secured till the end of the operation, very little hæmorrhage ensues, there is practically no traumatism to surrounding structures and a minimum of reaction, and that complete healing occurs in a week or less, without deformity.

(9) The Plica Triangularis.

Many tonsillar and peritonsillar affections, and systematic infections consequent thereon, are regarded by Frank G. Murphy as due to a deformed plica (*Laryngoscope*, May, 1917). It developes about the second month of fœtal life, is attached to the posterior and superior borders of the anterior and posterior faucial pillars respectively, and to the side of the tongue, and covers most of the tonsillar fossa. By birth, owing to the forward growth of the tongue, it has normally receded to an inconspicuous border behind the anterior pillar. If it fails thus to recede, portion of the fossa and tonsil remains covered, and drainage from the tonsillar crypts and capsular and pericapsular mucous glands is interfered with, detritus collects, becomes infected, and bacteria find entrance to the glands. When the plica has normally receded the anterior pillar in deglutition passes outside the tonsil, and by compression helps to evacuate the contents of the tonsillar crypts, but when the plica has not receded, its attachment to the tongue drags it to the inner side of the tonsil and no such evacuation ensues, the formation of retention cysts being thus favoured. The severance or removal of deformed plica is advocated in all cases.

(10) Chronic Adhesive Otitis.

A striking improvement in hearing, following myringotomy, in a case of chronic adhesive otitis, is reported by P. Watson-Williams (*Proc. Roy. Soc. (Med. Journ. Laryng., Rhin. Otology*, June, 1917). A woman, *æt.* 26, who had been hard of hearing for several years, on examination heard a whisper with the right ear 0.7 m. distant, and with the left ear 0.5 m. distant; after catheterization she heard with the right ear 1.35 m. and with the left ear 0.9 m. After recovering from tonsillectomy and removal of adenoids she heard whispers with the right ear at 2.2 m., and with the left ear 0.92 m.; immediately after left crucial myringotomy the whisper was heard with the left ear at 2.25 m. Purulent otitis followed, but soon subsided; hearing continued to improve, and at time of report, two months later, a whisper was heard by left ear at 7.2 m. The ultimate prognosis is doubtful,

British Medical Association News.

SCIENTIFIC.

A meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on November 30, 1917, Dr. R. Gordon Craig, the President, in the chair.

Dr. W. F. Litchfield read a paper on "The Appearance of the Lungs After Death from Asphyxia, and the Reasons Therefore. (See page 1.)

Dr. J. Burton Cleland stated that Dr. A. A. Palmer had asked him to refer to the post-mortem findings in two cases of asphyxia. A boy, aged 8 years, had fallen into a water hole and had been drowned. The post-mortem examination was carried out 24 hours later. There was some fine froth at the nose and mouth, the eyeballs were congested from dilatation of the small blood vessels. A little clear fluid was found in each pleural sac, and some small sub-pleural hæmorrhages were seen. The lungs did not collapse on opening the chest, and were voluminous, corresponding to the ballooning of the text books. They were œdematous (boggy) and, on section, a copious froth was exuded. The right auricle of the heart and the large vein were distended with dark blood, and the vessels of the brain were engorged. Dr. Palmer regarded the naked eye appearance as characteristic of death from drowning. The second case was one of smothering. The victim was an infant, aged eight weeks, who had been placed in a single, soft bed on his back at 1 p.m., and was found at 4 p.m. lying face downwards, dead. At the post-mortem examination the tongue was projecting beyond the gums. Some small hæmorrhages were seen beneath pleuræ and serous pericardium. There was some frothy mucus in the air passages. The lungs were dark and œdematous, and there was exudation of dark blood, on section. The right auricle and the large veins were distended with dark blood. There was congestion of the liver, spleen and kidneys, and engorgement of the vessels of the brain. Dr. Palmer has pointed out that this second case differed from the first in that the lungs were less œdematous, and not as voluminous. They did not exude frothy fluid, on section, and there was not much froth in the air passages.

Dr. H. Poate read a paper on the "Re-education of the Disabled Soldier." (See page 2.)

Dr. L. E. Ellis read a paper on "The Modern Traetment of Gonorrhœa." (See page 5.)

In the absence of Dr. E. H. Burkitt, Dr. H. S. Stacy read a paper by the former on "Experiences in a Casualty Clearing Station." Before reading the paper, Dr. Stacy spoke in terms of high praise of the valuable work performed by Captain Burkitt at the front. He pointed out that the strain was felt particularly by men over 40 years of age, and that very few senior practitioners could stand it. Captain Burkitt had proved an exception to the rule. He, apparently, had never tired, and was always ready for work. He was one of the most energetic surgeons Dr. Stacy had seen. The paper will be published in next week's issue.

Drs. Archie Aspinall, J. Ryan and R. Gordon Craig, added words of appreciation concerning the splendid work achieved by Captain Burkitt in the service of the country. Owing to the lateness of the hour, there was practically no discussion on the three papers.

Dr. W. B. Dight gave a demonstration of radiograms on the screen. The pictures included fractures of long bones, foreign bodies in limbs, bone grafts to cover defects due to shattered bone, and other war injuries.

Dr. H. S. Stacy exhibited a series of approximately 50 lantern slides, of photographs taken in Egypt and France. The pictures illustrated a casualty clearing station and one of the military hospitals, and the demonstrator explained the working in each Department. He added to his series of pictures a few radiograms of war injuries.

A clinical meeting of the Victorian Branch was held at the Alfred Hospital, Prahran, on November 144, 41917, Professor R. J. A. Berry, the President, in the chair.

Before proceeding to business, the President announced that he had just received word of the death of Dr. W. Weston Hearne on the field of battle. Dr. Hearne was outpatient Physician to that Hospital, and he moved that a letter expressing deep sympathy of the members be conveyed to the widow in the loss which she, in common with all of them, had sustained by his death. This was ceconded by Dr. Ernest Jones and carried unanimously.

Dr. A. V. M. Anderson showed polygraph tracings illustrating various forms of heart-block.

(1) 2 to 1 heart-block in male aged 60 years. There were symptoms of cardiac weakness with dyspnœa on exertion, and occasional fainting attacks, followed by slight twitchings. The blood pressure was 142 mm. Hg. The pulse-rate was 30. Aortic systolic and mitral systolic murmurs were heard.

(2) Incomplete heart-block, with dropped beat every 8 to 11 beats in a male aged 77 years. The tracing showed a much prolonged *a-c* interval varying from two-fifths of a second (after a dropped beat) to three-fifths of a second. The patient had had fainting attacks for over 30 years, which were followed during the latter part of the time by the Stokes-Adams' phenomena. Eventually he succumbed to angina pectoris.

(3) A tracing which showed frequent cessation of ventricular systole lasting for 3 to 5 seconds, the auricular beat persisting throughout this interval, and gradually weakening in rate till the resumption of the ventricular systole. The *a-c* interval in between the attacks was of the normal duration, one-fifth of a second. The attacks came on with quickly succeeding periods of the Stokes-Adams' phenomena and were occasionally brought on by physical exertion or by swallowing.

(44) Heart block in a patient with auricular flutter, the pulse sometimes being absent for a period of more than 7 seconds. The auricular rate was about 400, the pulse-rate being sometimes 83 and at others 25 per minute.

(5) Successive tracings from a female patient aged 21 years, showing 2 to 1, then 3 to 1 and ultimately completely dissociated heart block, the interval between the first and last tracing being about a month. There was no history of rheumatic, syphilitic or other infection. The Wassermann reaction was negative. There was no valvular cardiac disease. The patient died of syncope after a Stokes-Adams' attack shortly after the last tracing was taken. No post-mortem examination could be obtained. Possibly there was a new growth in the auriculaventricular bundle of His.

Mr. R. Hamilton Russell showed a series of cases illustrating points of interest in the surgery of the hip-joint. In a few explanatory remarks he drew attention to the fact that arthritis of the hip-joint leading to destruction of bone entering into the constitution of the joint, and producing some slight actual shortening, was invariably attended by adduction with more or less fixation. Where the arthritis was caused by some agency not causing bony invasion of the joint structure, an entirely different termination, *viz.*, ankylosis of the joint, was probable. Hence, although the mechanical treatment of the two classes of cases was identical, *viz.*, extension in the abducted position, it was necessary to distinguish clearly between them, otherwise a patient might recover with abduction and apparent lengthening of the limb, which was a very awkward position. In the case of a boy of 16 in whom this actually happened, and who was shown, it was found that time and usage had gradually rectified the malposition until the apparent lengthening had fallen from 7.5 to about 1.25 cm. Further remarks, illustrated by rough diagrams, were made on the theory and scope of subtrochanteric osteotomy.

He also demonstrated three cases of transplantation of ureters into the rectum for extroversion of the bladder. The first patient was a girl who had been born with complete extroversion of the bladder, wide separation of the pubic bones, and prolapse of the rectum. The operations performed in 1908, when she was 3 years of age, were: (*a*) transplantation of the ureters; (*b*) division of both ilia; (*c*) sigmoidopexis; (*d*) removal of the mucous membrane of the bladder, and repair of the pelvis. She was now, at the age of 12 years, a bright little schoolgirl, living her life normally

and happily. She emptied the bowels about five times daily, and occasionally wetted her bed at night time, but not often.

The second patient was a boy aged 9 years, with complete extroversion, for which one or two unsuccessful operations had been attempted in the endeavour to give him control over the urine. Transplantation had been done early in this year. The present conditions was one of excellent health. He emptied the bowels about four times daily, and never wetted the bed at night.

The third patient was a man aged 29 years, with a condition similar to that of the second patient. Transplantation had been carried out this year. He was now perfectly comfortable and dry during the day, but always wetted the bed at night.

In the last place, Mr. Hamilton Russell dealt with the case of a chauffeur who, after a five years' history, had applied for treatment of an advanced tuberculous disease of the right wrist and flexor tendon sheaths. Dissecting out of the tendon sheaths and complete excision of the wrist (Lister's method) had been performed ten months previously. He was able to do most things with his hand except start the car.

Dr. J. F. Mackeddie showed the following cases:—

Case I.—Pernicious Type of Anaemia of Sudden Onset. H.B., a young man, collapsed at his work and was taken to the hospital. There was great pallor and weakness. A mitral systolic murmur was detected. After the shock stage had passed, this pallor and weakness continued. Three blood examinations extending over five weeks, gave the following:—

	1	2	3
Red blood corpuscles	2,300,000	3,290,000	4,100,000
Colour index ..	1.3	1.2	.96
	Megalocytes	Megalocytes	Normal
	Microcytes	Microcytes	film.
	Normoblasts	No normoblasts	

He had been perfectly well till the day of collapse. Treatment with arsenic was pushed. He felt as well as he had before the attack .

Case II.—Tabes Dorsalis. The patient, A.M., was a young man. Twelve years before he had been an out-patient at the Melbourne Hospital under Dr. Stawell. He had been seen frequently by Dr. Mackeddie, who was Dr. Stawell's assistant then. Ataxia was extreme, and the pains unbearable. He could barely get from the tram to the out-door department with the aid of two sticks. He was seen by Dr. Mackeddie at the Alfred Hospital frequently since then, on account of trouble in connexion with Charcot's joint, ptoses and bladder symptoms. His gait had lost its ataxic character and no pain was present. The treatment consisted in giving mercury and exercises.

Case III.—Rheumatoid arthritis deformans of long standing, under treatment. A young man for five years was bedridden on account of bent legs. He had been treated by the application of splints and was then able to stand with straight legs.

Case IV.—A young girl, with bed splints on had not walked for 12 months. Her legs had been acutely bent, but had become straight.

The treatment in these cases consisted in rest in bed, calliper splints and hot air massage. The adhesions had been gently broken down under an anæsthetic several times.

For chronic cases he considered vaccines absolutely useless. With persistent treatment on the lines indicated there was no case, however badly bent the legs or of however long standing, in which the legs could not be straightened out and the patient made to walk.

Case V.—Traumatic hysterical hemiplegia. J.H., a young man of good build and condition, was jerked backwards at his work and fell on his left shoulder and neck. When he was taken to hospital there was great pain in the shoulder, and the left arm was powerless. There was a tumultuous action of the heart with pain in the præcordium. The condition spread rapidly, till a few hours later there was absolute hemiplegia and total hemi-anæsthesia (insensibility to the blow of a hammer as well as to wool touch). The condition was one of flaccid paralysis. The reflexes were precisely the same as on the sound side. There was an apparent lack of all concern about his condition. He refused to be interfered with by examination under an anæsthetic. The injury was trivial. The previous condition of the man was that of a hard working labourer, apparently free from any neurotic tendency.

Case VI.—Cerebral Tumour. Mrs. S., *act.* 40 years, had for 12 years had attacks of an epileptiform nature, Jacksonian at times, at times suggestive of hysteria. She had in fact been treated for hysteria. Finally she developed left arm paresis and partial anæsthesia. Headaches were present, but no vomiting, and no optic neuritis. She was trephined in the right lower Rolandic area. There was a bulging of the *dura mater*. This was incised and a cyst was discharged of undiscoverable nature. She made a good recovery. For six months there was no return of the fits, which used to be of daily occurrence. Fourteen days previously she had a fit and had again applied for further treatment.

Casd VII.—H. A., a young man, had consulted him for "fits." His wife's description left no doubt of their epileptic nature. The beginning of an attack was always a violent naso-pharyngeal obstruction sensation. A badly deflected septum was put right, and a not unjustifiable hope of improvement was held out to the patient. The wife reported some drooping of the left hand after, and, she thought, due to, the operation. Dr. Mackeddie thought that he had allowed him to overlie the arm at the operation. A few days later the wife reported that he was dragging his left foot. Dr. Mackeddie knew that he had not allowed the patient to overlie his foot. Subsequently there was a rapidly developing left side paresis and partial anæsthesia, violent and constant pain behind the right eye, and vomiting, but no optic neuritis. He was trephined over the right lower Rolandic area and a condition similar to that found in Mrs. S. was found. The cyst was evacuated.[1]

Mr. R. C. Brown showed the following cases:—

Case I.—T.D., a soldier with large bone deficiency of the right side of the forehead. On placing the palm of the hand over the deficiency, the brain could be plainly felt to fall forward as the patient stooped. The case was shown as an illustration of the feeling of insecurity in skull deficiency cases.

Case II.—G.F.B., a soldier who had been operated on on October 8, 1917, for a skull gap of 6.25 cm. diameter in the right temporal region. The gap was filled by bone grafts obtained by splitting the sixth and seventh ribs *in situ*, the repair being firm and solid, and the shape of the skull being similar to that on the opposite side. The former symptoms of vertigo and headache were relieved.

Case III.—J.B., a soldier; a case of nose repair. At Mouquet Farm a shell fragment entered below the right temporo-maxillary articulation and came out through the bridge of the nose, carrying away the whole bony framework and leaving a broad, angular scar below the level of the corneæ. He was operated on September 15, 1917, by excision of the scar and raising flaps on either side. Half the thickness of the end of the seventh rib with its cartilage attached was chiselled off, and after having been pared, was bent to the arched shape of the nasal bones and kept in shape by a bridge of chromic gut. The thinned bone was implanted into the prepared glabella and the cartilage sutured into the cartilaginous part of the nose. The graft took well, though a large hæmatona formed after the operation. The result was that the transverse arch of the nose was restored, while the bridge was of the natural level and not too high, as was usually the case where non-ductile bone was used.

Case IV.—J.T., excision of the greater part of the stomach and transverse colon, eighteen months before. In spite of a subsequent empyema the patient was 19 kilograms heavier than before the operation. The case was shown as an illus-

[1] This patient died since the date of the meeting. At the post-mortem examination a large glioma was discovered arising from the temporo-sphenoidal region and capped by a small cyst over the lower Rolandic area. From the first epileptiform attack to his death was only some 12 weeks.

tration of the unexpectedly good result which sometimes followed excision of apparently hopeless malignancy.

Dr. J. P. Major showed a case of arterio-sclerosis with localized lesions in the brain, eyes, etc.

John C., *aet.* 50 years, was subject to epileptic attacks, occurring almost every three months, without any aura. His first attack occurred twelve years before, and since then his right eye has been weak. The family history was good. His functions were normal, his urine was normal, and his blood pressure 150 mm. Right plantar Babinski's phenomenon was elicited. The vision of the right eye sufficed to detect finger at 1.2 metres. There was nasal hemianopsia. The disc was pale, especially on the temporal side. The *lamina cribrosa* was clearly visible. The temporal branch of the *arteria centralis retinae* was practically obliterated by arterio-sclerosis. The Wassermann reaction was negative. The patient used to be a heavy drinker. The condition of the eye strongly suggested central arterio-sclerosis, as the cause of his fits.

Dr. John Kennedy showed the following cases:—

Case I.—Chloroma of Face. F.E., a female, aged 23 years, a housemaid, came under observation with pain and swelling over left malar bone three years before. She had been referred to Dr. Kennedy from the Nose and Throat Department. The Medical Officer reported that the nose, sinuses, etc., were normal. The Wassermann reaction was partial, and later positive. She was treated with mercury, iodide and arseno-benzol. The pain persisted, and the swelling became pigmented. Greenish-brown pigment appeared in March, 1916. The diagnosis was made of angioma with hæmorrhage, and the mass was excised. At the operation it was found to be very vascular, extending down to malar process of maxilla bone. There was primary union of the wound. The specimen had been lost on the way to the laboratory. Six months later a diffuse tender swelling appeared along left zygoma, extending on to cheek and into the temporal region. This soon became a dusky green colour. Condition was regarded as sarcoma and quite inoperable. Secondary spots appeared along the side of the neck. At first the swelling was slight, and later the spots became of a dusky green colour. At this stage ulceration occurred in the primary and secondary growths, and the patient developed a cough. Noise sounds were present in both lungs. She was put on injections, twice weekly, of sodium cacodylate. The dose at first was 0.3 gm., and was rapidly increased until she was receiving 2.7 gm. twice a week. She improved rapidly. The ulcers healed, leaving scarring as seen at present; the swelling had disappeared. A general peripheral neuritis came on and the arsenic was stopped for six weeks. The patient was kept on iodide and mercury during this period. Three months before a similar diffuse swelling appeared over the right malar bone and along the zygoma. It assumed a green colour two weeks later. Secondary swellings had appeared in following order: mid-sternal region, right lumber region, back, left leg, right leg, left iliac region, upper end of sternum, lower jaw and left side. These appeared first as a green swelling, and later as brown spots of hæmorrhage, and the green colour disappeared after some weeks. With the recurrence of the condition she was given arsenic again, and was then taking 1.8 gm. twice a week. The older swellings were undoubtedly disappearing, but new ones were forming. A diagnosis of chloroma had been suggested by the position, character and rate of growth. The blood examination showed a depression of the anæmia, but no alteration in the white cells, as was found in that condition, had been demonstrated.

Case II.—Syphilis of the Stomach, gummata of the liver. P., a male, *aet.* 28 years, was admitted to hospital on May, 1917, with a complaint of attacks of abdominal pain and loss of 25 kilograms in weight during the previous twelve months. The history and examination suggested a cholecystitis. An operation showed the presence of a large mass involving the pylorus, adherent to the pancreas, infiltrating to the transverse fissue of the liver and apparently large secondary masses in the liver. Section showed these to be gummata. The Wassermann reaction was positive. The condition cleared up with mercury, iodide and arseno-benzol treatment.

Case III.—Syphilis grafted on an old arthritis of the knee-joint. B., a male *aet.* 25 years, had had an injury to his knee five years before. He had had a primary chancre. He had a few months' treatment. The knee became swollen again, and he ceased work in May of 1917. The Wassermann reaction was positive. Marked improvement followed under treatment, but the patient absconded and went to work in the country in July, 1917. He had had no treatment since. The knee joint was again swollen.

Dr. S. A. Ewing showed a case of congestion and blocking of the nasal sinuses causing headaches.

The history of this patient revealed an often unrecognized source of severe headaches, congestion and blocking of the nasal sinuses, apart from any suppurative disease. The patient, otherwise a healthy made adult, was first seen in July of 1917. He had suffered very severely for two and a half years from headaches in the frontal, temporal and occipital regions. These were induced at any time by coughing or clearing the throat, but their most characteristic trait was their onset within a minute or two of rising in the morning. Lying down during the day also tended to induce or aggravate the headaches. Dr. Ewing stated that the increased congestion of the nasal sinuses from gravitation explained this feature, but ocular headaches were generally relieved by rest. On examination the nasal mucous membrane was found to be congested and slightly hypertrophied, the passages especially in the upper regions were narrowed, and the nasal septum was thickened. With the object of relieving the pressure in the ethmoidal region and giving freer drainage to the frontal and ethmoidal sinuses, the nasal septum was resected, the anterior third of the middle turbinals removed and the remainder of the middle turbinal severed away from the openings of the ethmoidal cells. Complete relief from the headaches immediately resulted. A skiagram taken showed no indication of any sinus disease. Four months later following an attack of influenza, acute frontal sinusitis supervened, with recurrence of the headaches in the frontal, temporal and occipital regions, but more marked in the super-orbital region. A skiagram then showed the frontal sinuses to be affected. An internal frontal sinus operation failing to give complete relief, an operation on both frontal sinuses and the fronto-ethmoidal cells was performed a fortnight ago, followed again by complete relief to the headaches and also to the sinusitis.

Dr. Stanley Argyle demonstrated a new high tension transformer known as the "Snook" apparatus which has been recently installed in the Radiographic Room. With this apparatus, which overcame the difficulty of the alternating current supply, it was possible to take radiographs of the pelvis and other dense parts of the body in a fraction of a second, while it was flexible enough to be used for screening or treatment. With the "Snook" the use of coils, breaks, condensers and valve tubes was dispensed with.

Dr. W. Denehy, Clinical Pathologist at the Alfred Hospital, demonstrated the following pathological specimens:—

I.—Unilaterial Renal Tuberculosis. Both specimens showed tuberculous lesions communicating with pelvis. *Bacilli tuberculosis* were present in the urine in both cases. Catheterization of the uterers was carried out, and 3 c.cm. of urine was obtained from the right ureter. It was thick, turbid, loaded with polymorpho-nuclear and red blood corpuscles. The urea content was 0.8%. *B. tuberculosis* were present in large numbers. From the left ureter, 30 c.cm. of urine contained a few red blood corpuscles but no polymorpho-nuclear cells were obtained. The urea content was 3%.

II.—Haemorrhagic adrenals occurring in a fatal case of purpura. The hæmorrhagic inflammation of the adrenals occurring in fulminant and hyperacute cases of cerebro-spinal fever showed a patchy hæmorrhagic condition, quite different from the specimen exhibited. In cases where the condition had lasted some days, there was a greater resemblance to this state, but the hæmorrhage was never so free or uniform.

III.—Bilateral polycystic kidneys (three cases). Each kidney in the largest exhibit weighed over 2.6 kilogram. A minor grade of polycystic change was seen in the liver in one case.

IV.—Horseshoe kidney. This was found on post-mortem examination. No symptoms were noticed during life. Death was due to other causes.

V.—Hydatid kidney. This specimen was also found post-mortem. No symptoms were noted during life. The cause of death was cerebro-spinal meningitis.

VI.—Bilateral double ureters with multiple vesicle. Two cases were shown, both found post-mortem. There were no symptoms during life, death occurring from other causes.

VII.—Tumours of the kidney. (*a*) Sarcoma (in infant). An operation had been performed but the sarcoma had recurred. (*b*) Hypernephroma. (*c*) Sarcoma (in adult), showing central softening.

VIII.—Acute suppurative nephritis, of which the origin was doubtful.

IX.—Unilateral pyonephrosis due to *bacillus coli communis.* Nephrectomy had been performed and the patient had recovered.

X.—Haemorrhagic pyelitis. Examples of surgical and granular kidneys were exhibited.

XI.—Renal Calculus. Changes produced in the kidneys. (*a*) Calculous nephritis (unilateral). Nephrectomy had been performed, with recovery of the patient. (*b*) Unilateral pyonephrosis (no record). (*c*) Unilateral hydronephrosis. Nephrectomy had been performed and recovery had followed.

XII.—Cerebral tumours. (*a*) Sarcoma, showing terminal hæmorrhage. (*b*) Neoplasm, a glioma, bursting on to the base of the brain, distending the optic chiasma, and simulating a pituitary tumour. There were bilateral signs. (*c*) Tuberculous granuloma, with localized tuberculous meningitis in the region of the *insula* (Island of Reil).

Dr. H. C. Colville showed the following cases, illustrating the variety of the manifestations of endocarditis in children:

Case I.—Boy, aged 6, had his first attack of chorea of four weeks' duration. There was mitral endocarditis, which developed under observation a fortnight after the onset.

Case II.—Boy, aged 9, was suffering from his second attack of chorea, showing well-marked mitral stenosis.

Case III.—Girl, aged 9, with a third attack of chorea. There was gross mitral regurgitation with great enlargement of the heart.

Case IV.—Girl, aged 11, was admitted during her second attack of acute rheumatism. She had a definite aortic endocarditis without any evident mitral lesion.

Mr. Syme, on behalf of the Honorary Medical Staff of the Melbourne Hospital, thanked the members of the staff of the Alfred Hospital for the interesting variety of cases shown, some of special merit and one unusual case, that of chloroma shown by Dr. Kennedy.

Dr. Murray Morton, on behalf of St. Vincent's Hospital, remarked that the standard of work on the surgical side was of a high order, and probably the medical cases were of equal interest. He was struck by the originality of the methods adopted in some cases. Visits to other hospitals could not be but productive of good results. Unfortunately the habit had been to go abroad, although many interest cases could be seen in their own city.

Dr. A. V. M. Anderson, on behalf of the Alfred Hospital Staff, thanked the speakers for their encouraging remarks, and expressed the opinion that a great deal could be learnt from the surgical side of the hospital.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on December 13, 1917, Professor R. J. A. Berry, the President, in the chair.

The President congratulated the members present on the confidence shown in them by the body of members in that all the members of the 1918 Council had been members of the 1917 Council. Drs. R. L. McAdam and W. Ernest Jones were elected to two vacancies on the Council. Dr. Alex. Lewers was elected Honorary Assistant Treasurer, and Dr. J. Newman Morris Honorary Assistant Secretary.

The following sub-committees were appointed, the President and Honorary Secretary to serve on all committees *ex-officio.* The first named on each committee was appointed convener:—

Organization: Drs. Allen Robertson, A. V. M. Anderson, W. R. Boyd, J. F. Wilkinson, J. R. Davis, D. Rosenberg, R. L. McAdam, B. Crellin, L. J. Balfour, R. H. Fetherston, A. Norman McArthur and Basil Kilvington, with power to add to its number.

War Organization: Mr. C. Stanton Crouch, Drs. W. R. Boyd, R. L. McAdam, T. P. Dunhill and A. Jeffreys Wood.

Press.—Drs. Alex. Lewers and J. F. Wilkinson.

Ethical: Drs. A. V. M. Anderson, Basil Kilvington, Alex. Lewers, R. L. McAdam, F. L. Davies and L. J. Balfour.

Legislative: Drs. B. Crellin, F. L. Davies, W. Ernest Jones, J. Newman Morris, Honorary Assistant Secretary.

House.—Dr. C. H. Mollison.

Scientific: Drs. H. Douglas Stephens, Alex. Lewers, Allen Robertson, Basil Kilvington and Konrad Hiller, with power to add to its number.

Medical Agency: Drs. Kent-Hughes, Mollison, Robertson, Crellin, Kilvington.

Dr. H. Douglas Stephens was appointed the representative of the Council on the Bush Nursing Association, and on the Advisory Board of Medical Inspector of Schools.

Leave of absence was granted to the President till the middle of February.

The following were elected members of the Branch:—

Dr. Erwin Kelmar, Carlton.

Dr. Milton Leonard Coutts, St. Kilda.

The undermentioned has been nominated for election as a member of the New South Wales Branch:—

Charles Aloysius Burfitt, M.B., Ch.M., 1916 (Univ. Sydney), 222 Glebe Road, Glebe.

Correspondence.

BARCOO ROT AND SPEW.

Sir,—My experience has been that both these diseases are associated with, or caused by, scurvy, and that the treatment of this condition is essential to the cure of barcoo. The presence of the purpuric condition described by Dr. Chas. Mill first suggested scurvy to me, and a long series of cases has confirmed it. In the back country milk is generally obtainable, and the use of sour milk, well whipped, or skim milk or butter milk seems to supply in large measure the anti-scorbutic elements necessary to a cure.

When seen early *mist. mag. sulph. acid.* often cures the rot very quickly. In older cases *ferri. sulph.* is necessary in addition.

In all cases *ung. hyd. ammon. chlor.* is needed as a local application.

As for spew, my opinion is that amongst the old hands it is scorbutic and amongst the new-comers mostly suggestion. At any rate, treating the former for scurvy and the latter with lupulin 0.6 gm. (grs. 10) *t.d.s.* has given practically certain results in my hands, as long as the constipation present has been relieved by the usual methods.

Yours, etc.,

JAS. M. MERRILLEES, M.B., F.R.C.S., Ed.

December 18, 1917.

Roma, Queensland.

JONES AND LE COUTEUR.

Sir,—Referring to the above case, heard at the Hawthorn Court, Victoria, a few weeks ago, certain statements were made by the defendant's witnesses, Dr. Frank Andrew, Dr. J. Newman Morris and Dr. W. M. Clayton, which, with your permission, I would like to comment upon with the sole object of upholding scientific work and the interests of the medical profession generally, being content to rest upon the verdict of your editorial note at the close of the correspondence as to whose position can be maintained.

The case was one of paracentic deafness under prolonged daily treatment by the method of Chas. J. Heath, F.R.C.S., a prominent ear specialist and author in London. Dr. Frank Andrew maintained that the term as applied by me was one of general significance, applicable to a variety of conditions, as a symptom of ear trouble. (2) That the patient whom he carefully examined, was suffering from otosclerosis. (3) That the treatment to which the patient had been subjected was absolutely valueless, and that Heath's treatment was no good. (4) That the treatment to which the patient had been subjected was not new, having been introduced some

fifteen years since, (5) That no man claiming to understand ear troubles, would use it in the case under consideration, and (6) that understanding of the bare elements of ear troubles would prevent it.

As this evidence appeared in the press, I invite Dr. Andrew to maintain the position he has taken up and verify his statements by answering the following questions:—

(*i.*) If the term "paracentic deafness" is of general significance, applicable to a variety of conditions, as a symptom, what are the varieties of conditions of which it is a symptom?

(*ii.*) If the patient was suffering from otosclerosis, what were the various conditions found which enabled him to form his diagnosis? And here I would expect him to leave no condition untouched, taking nothing for granted.

(*iii.*) In what condition would he apply the treatment carried out by Heath.

(*iv.*) Mention the year in which Heath's standard work dealing with his treatment was first put upon the market and so into the hands of the profession; or if he prefers to give the earliest date at which Heath published his notes upon the treatment, putting the same into the hands of the profession. We will then be able to get along.

Dr. J. Newman Morris stated that if he had been paid £25 for doing the same work on 105 occasions, he would not only consider he was paid, but "paid handsomely."

Dr. W. N. Clayton corroborated Dr. Morris by using the same words.

My only comment is: If Dr. Morris based his scale of charges at the same rate, 5s. a consultation, when he had rooms in Collins Street, it can hardly be surprising that his energies are now confined to the suburb in which he lives.

I have no doubt but the correspondence from Dr. Andrew will open an interesting discussion from those who take an interest in ear work.

Yours, etc.,
RICHARD JONES.

110 Collins Street,
December 21, 1917.

It has been announced in the *Victoria Gazette*, No. 193, of December 19, 1917, that puerperal fever has been added to the list of notifiable diseases throughout the State of Victoria.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xvii.

Commonwealth Serum Laboratories, Biochemist, Senior Bacteriological Technical Assistant, and Bacteriological Technical Assistant.

Newcastle Hospital, Junior Resident Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	Brunswick Medical Institute. Bendigo Medical Institute. Prahran United F.S. Dispensary. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia, Limited. Mutual National Provident Club.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Medical Officers to the Selwyn Hospital, North Queensland. Brisbane United Friendly Society Institute.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide. Contract Practice, Appointments at Renmark.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Penrith, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
TASMANIA. (Hon. Sec., Belgrive, Tasmania.)	Medical Officers in all State-aided Hospitals in Tasmania.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

Jan. 8.—N.S.W. Branch, B.M.A., Council (Quarterly).
Jan. 15.—Tas. Branch, B.M.A., Council and Annual Meeting.
Jan. 15.—N.S.W. Branch, B.M.A., Ethics Committee; Executive and Finance Committee.
Jan. 17.—Vic. Branch, B.M.A., Council.
Jan. 18.—Queensland Branch, B.M.A., Council.
Jan. 22.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Jan. 29.—N.S.W. Branch, B.M.A., Council.
Jan. 30.—Vic. Branch, B.M.A., Council.
Feb. 1.—Q. Branch, B.M.A., Meeting.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.